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# **2017 Market Research Report on Global Paint Remover Industry**

**QYR Chemical & Material Research Center**

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## 2017 Market Research Report on Global Paint Remover Industry

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### Summary

The Paint remover revenue was 1242.6 M USD in 2016 and is expected to reach 1552.0 M USD in 2022. North America's sales accounted for the highest market share (31.01 %) in 2016, followed by Europe.

This report studies Paint Remover in Global market, especially in North America, Europe, China, Japan, Southeast Asia and India, focuses on top manufacturers in global market, with capacity, production, price, revenue and market share for each manufacturer, covering

WM Barr

Savogran

Dumond Chemicals

Absolute Coatings

Fiberlock Technologies

Sunnyside

Packaging Service Co.

Motsenbocker

Akzonobel

Henkel

3M

Green Products

3X: Chemistry

Franmar Chemical

PPG (PPG Aerospace)

United Gilsonite Labs

Formby's

GSP

Certilab

Cirrus

ITW Dymon

Rust-Oleum

EcoProCote

EZ Strip

Sansher Corporation  
Auschem  
Kimetsan Group  
Changsha Guterui  
TIMEASY  
BODE  
Hairi Cleaning  
DOMIN Chemical

Market Segment by Regions, this report split s Global into several key Regions, with production, consumption, revenue, market share and growth rate of Paint Remover in these regions, from 2012 to 2022 (forecast), like

North America  
China  
Europe  
Japan  
Southeast Asia  
India

Split by Product Types, with production, revenue, price, market share and growth rate of each type, can be divided into

The Caustic Type  
The Acidic Type  
The Solvent Type

Split by applications, this report focuses on consumption , market share and growth rate of Paint Remover in each application, can be divided into

Vehicle Maintenance  
Industrial Repair  
Building Renovation  
Furniture Refinishing  
Others

With 280 tables and figures the report provides key statistics on the state of the industry and is a valuable source of guidance and direction for companies and individuals interested in he market



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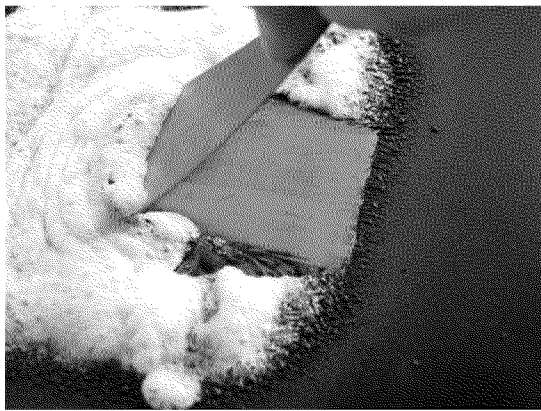
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# 1 Paint Remover Market Overview

## 1.1 Product Overview and Scope of Paint Remover

Paint remover (also known as paint strippers or strippers) is a mixture liquid consisting of chlorinated hydrocarbons, ketones, esters, alcohols, benzene and other solvents. It utilizes the solvent's osmotic swelling characteristics to the coverings, with which the paint can be directly peeling or make the coating peeling easier.

### Figure Picture of Paint Remover



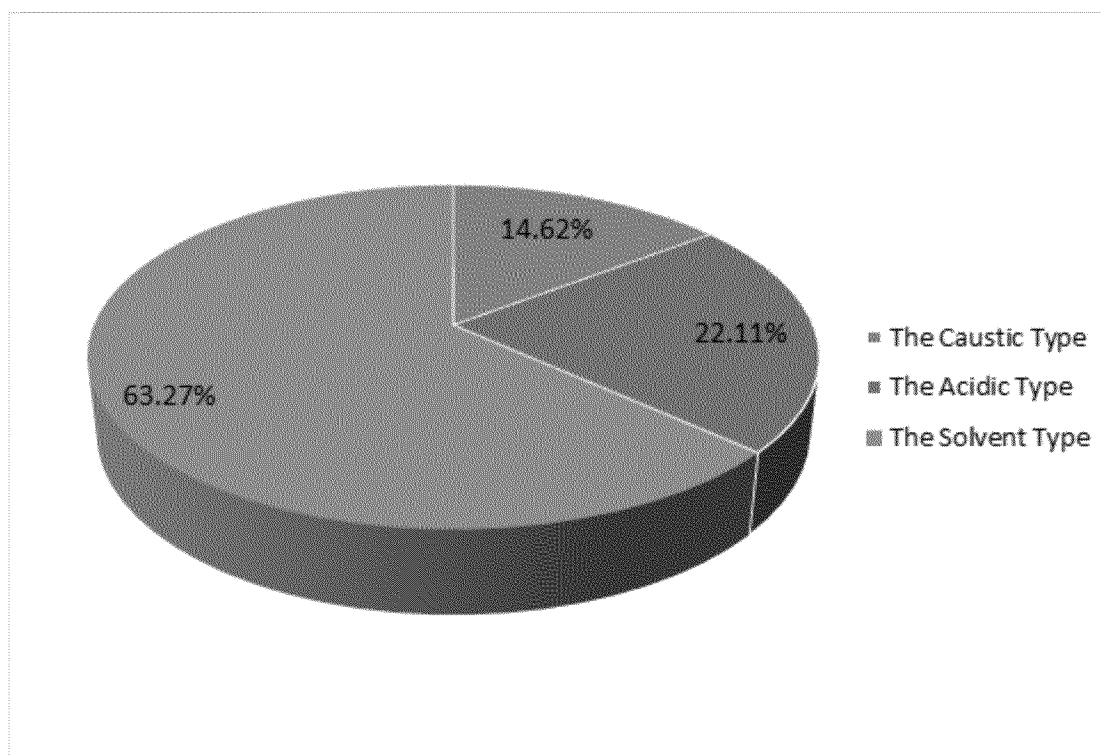
Source: QYR Chemical & Material Research Center, Feb 2017



## 1.2 Paint Remover Segment by Types

### 1.2.1 Global Production Market Share of Paint Remover by Types in 2016

**Figure Global Production Market Share of Paint Remover by Types in 2016**



Source: QYR Chemical & Material Research Center, Feb 2017

**Table Classification of Paint Remover**

Types	Description
The Caustic Type	The caustic paint removers, typically sodium hydroxide (also known as lye or caustic soda), work by breaking down the chemical bonds of the paint, usually by hydrolysis of the chain bonds of the polymers forming the paint.
The Acidic Type	The acidic paint remover is typically based on the strong acid such as concentrated sulfuric acid, hydrochloric acid, phosphoric acid and nitric acid etc.
The Solvent Type	The solvent-based paint remover can be divided into three types: common solvent-based paint remover, chlorinated hydrocarbon solvent-based paint remover, waterborne paint remover.

Source: QYR Chemical & Material Research Center, Feb 2017

## 1.2.2 The Caustic Type

The caustic paint removers, typically sodium hydroxide (also known as lye or caustic soda), work by breaking down the chemical bonds of the paint, usually by hydrolysis of the chain bonds of the polymers forming the paint. Caustic removers must be neutralized or the new finish will fail prematurely. In addition, several side effects and health risks must be taken into account in using caustic paint removers. Such caustic aqueous solutions are typically used by antique dealers who aim to restore old furniture by stripping off worn varnishes, for example.

## 1.2.3 The Acidic Type

The acidic paint remover is typically based on the strong acid such as concentrated sulfuric acid, hydrochloric acid, phosphoric acid and nitric acid etc. The concentrated hydrochloric acid, nitric acid generate mist because of volatile and have a corrosive effect on metal substrates. The concentrated phosphoric take a longer time, and have a corrosive effect on the substrate, so the above-mentioned three kinds of acids are less used for the faded paint. Concentrated sulfuric acid has a small corrosive effect to the aluminum, iron and other metal because of passivation reaction. At the same time have a strong dehydration and carbonization to the organic matter and make it soluble in water, so concentrated sulfuric acid is often used in the acidic paint remover.

## 1.2.4 The Solvent Type

The solvent-based paint remover can be divided into three types: common solvent-based paint remover, chlorinated hydrocarbon solvent-based paint remover, waterborne paint remover.

Common solvent-based paint remover:

Common solvent-based paint remover is a mixture of common organic solvents and other components with the addition of paraffin, such as T-1, T-2, T-3 paint remover. T-1 paint remover is composed of ethyl acetate, acetone, ethanol, benzene, and paraffin; T-2 is ethyl acetate, acetone, methanol, benzene, other solvents and paraffin, and the stripping action is strong; T-3 is a mixture of Methylene Chloride, plexiglass, ethanol, and paraffin. It is low toxicity, and good stripping effect. They have the stripping effect to alkyd paint, lacquer, acrylic paint and paint vinyl chloride and so on. But the organic solvents in paint removers have properties of volatile, flammable and toxic, so it should be used in a well-ventilated place.

Chlorinated hydrocarbon based paint remover:

Chlorinated hydrocarbon based paint remover solves the stripping problem of epoxy and urethane-based coatings. It's easy to use, high stripping efficiency, and less corrosive to metals. Mainly composition by the solvent (traditional paint strippers are mostly chosen Methylene Chloride as an organic solvent, while modern paint strippers generally use high boiling solvent, such as dimethyl aniline, dimethylsulfoxide, propylene carbonate and N-methyl pyrrolidone, alcohols, and aromatic solvents in combination, or in combination with a basic or acidic hydrophilic system combined

preparation), solubilizers (e.g., methanol, ethanol and isopropanol, etc. ), activating agent (e.g. phenol, formic acid or ethanolamine, etc.), a thickener (e.g., polyvinyl alcohol, methyl cellulose, ethyl cellulose, fumed silica and the like), the volatile blocking agents (such as paraffins, peregall, etc.), surfactants (e.g., O P -10, OP -7 and alkyl benzene sulfonate, etc.), corrosion inhibitors, penetrating agents, wetting agents and thixotropic agent.

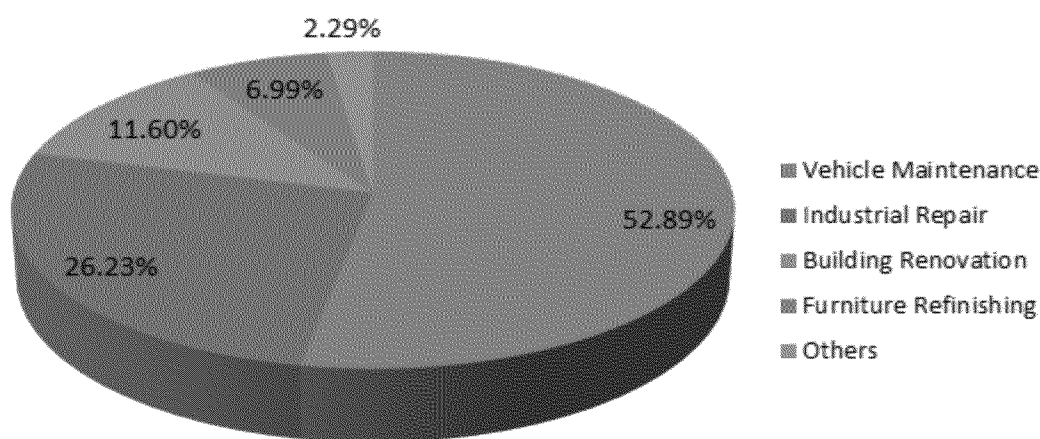
#### Waterborne paint remover:

In China today , researchers have successfully developed aqueous paint remover utilize benzyl instead of Methylene Chloride alcohol-based solvent. Except benzyl alcohol, it also includes a thickener, the volatile blocking agents, activators and surfactants etc. It consists essentially of (by volume ratio): 20% to 40% of the solvent componen t and 40% to 60% of the acidic water-based component containing a surface active agent. Compared with traditional Methylene Chloride based paint remover, it's less toxic, and the stripping rate is quite similar. It can stripp epoxy coatings, epoxy zinc yellow primer, especially has a good effect for aircraft skin.

## 1.3 Paint Remover Segment by Applications

### 1.3.1 Paint Remover Consumption Market Share by Applications in 2016

**Figure Paint Remover Consumption Market Share by Applications in 2016**



Source: QYR Chemical & Material Research Center, Feb 2017

### Table Applications of Paint Remover

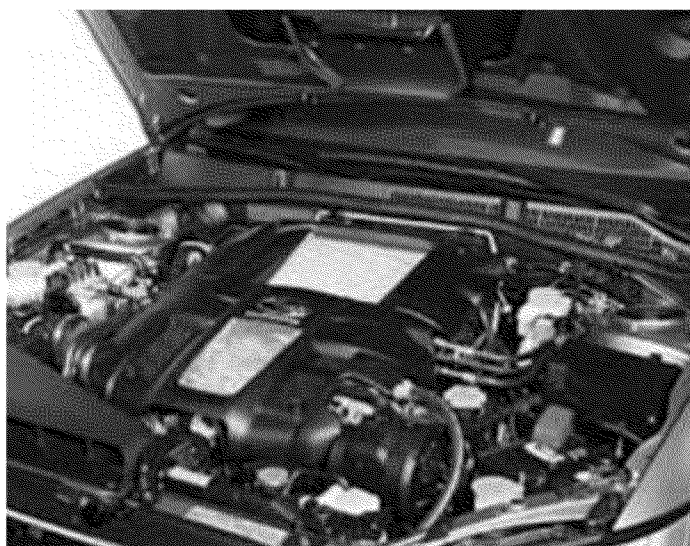
Applications	Description
Vehicle Maintenance	In the airline industry, no matter civilian or military aircraft, for aesthetic and safety requirements, requires regular stripping, trimming back new.
Industrial Repair	Many of machinery, plant needs paint out of the purpose of protection, and for the safety and aesthetic considerations, they need paint remover for regular maintenance.
Building Renovation	Now a lot of Building Renovation, including home and office buildings will take painting paint remover and will be used for maintenance and re-decoration.
Furniture Refinishing	Furniture would usually coat with the paint for beauty and durability purposes. In order to repair old furniture, and sometimes are some of the ageold furniture, will need to use paint strippers.
Others	Paint remover has many other uses: the historic restoration, road traffic sign maintenance and update, and so on.

Source: QYR Chemical & Material Research Center, Feb 2017

### 1.3.2 Vehicle Maintenance

In the airline industry, no matter civilian or military aircraft, for aesthetic and safety requirements, requires regular stripping, trimming back new. The paint remover is also needed in ships, yachts, even in cars and other vehicles as well. This paint remover because was often more expensive for its special use.

#### Figure Vehicle Maintenance Examples



Source: QYR Chemical & Material Research Center, Feb 2017

### 1.3.3 Industrial Repair

Many of machinery, plant needs paint out of the purpose of protection, and for the safety and aesthetic considerations, they need paint remover for regular maintenance.

#### Figure Industrial Repair Examples

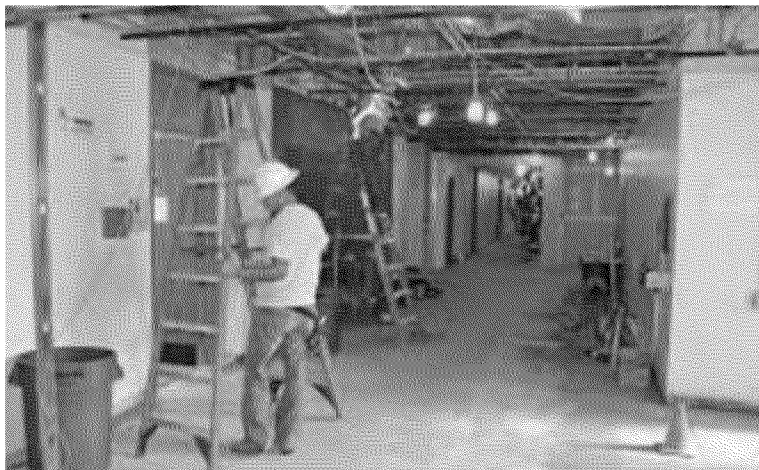


Source: QYR Chemical & Material Research Center, Feb 2017

### 1.3.4 Building Renovation

Now a lot of Building Renovation, including home and office buildings will take painting paint remover and will be used for maintenance and re-decoration.

#### Figure Building Renovation Examples



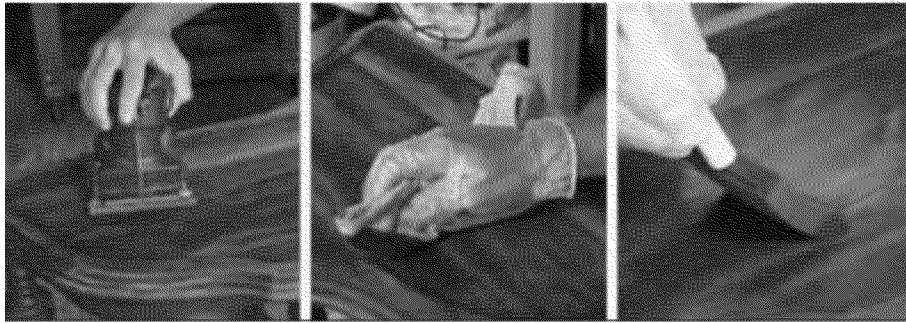
Source: QYR Chemical & Material Research Center, Feb 2017

### 1.3.5 Furniture Refinishing

Furniture would usually coat with the paint for beauty and durability purposes. In order to repair old

furniture, and sometimes are some of the age-old furniture, will need to use paint strippers.

### **Figure Furniture Refinishing Examples**



Source: QYR Chemical & Material Research Center, Feb 2017

### **1.3.6 Others**

Paint remover has many other uses: the historic restoration, road traffic sign maintenance and update, and so on.

### **Figure Others Examples**

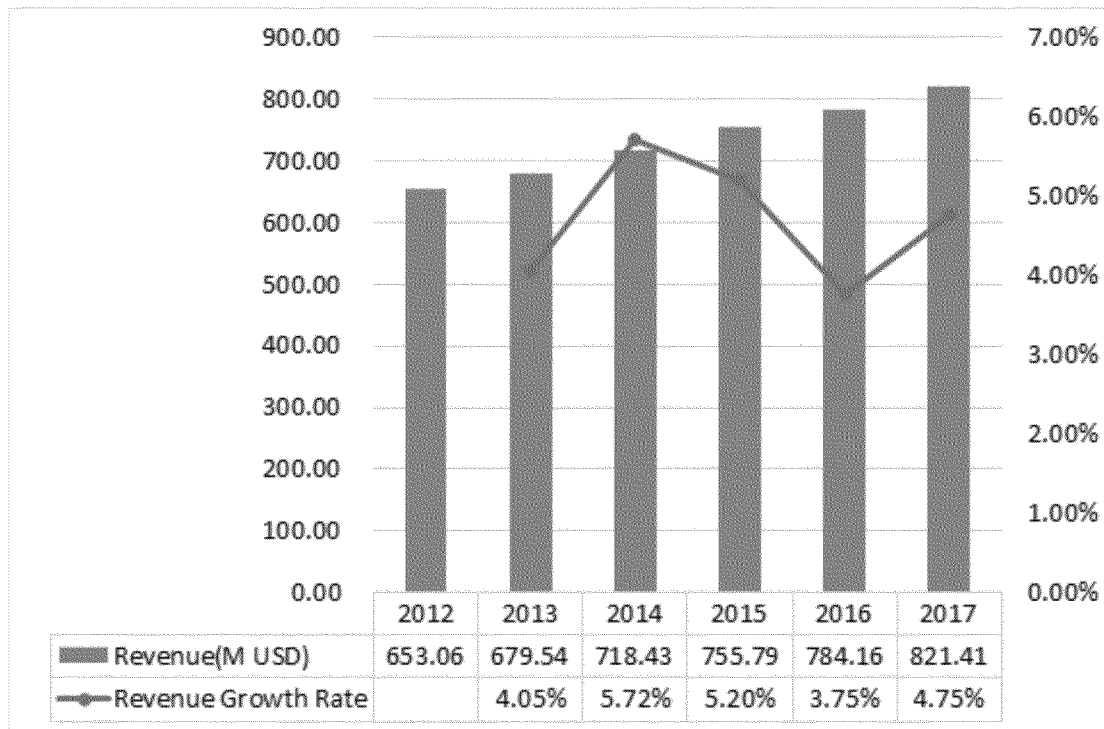


Source: QYR Chemical & Material Research Center, Feb 2017

## 1.4 Paint Remover Market by Regions

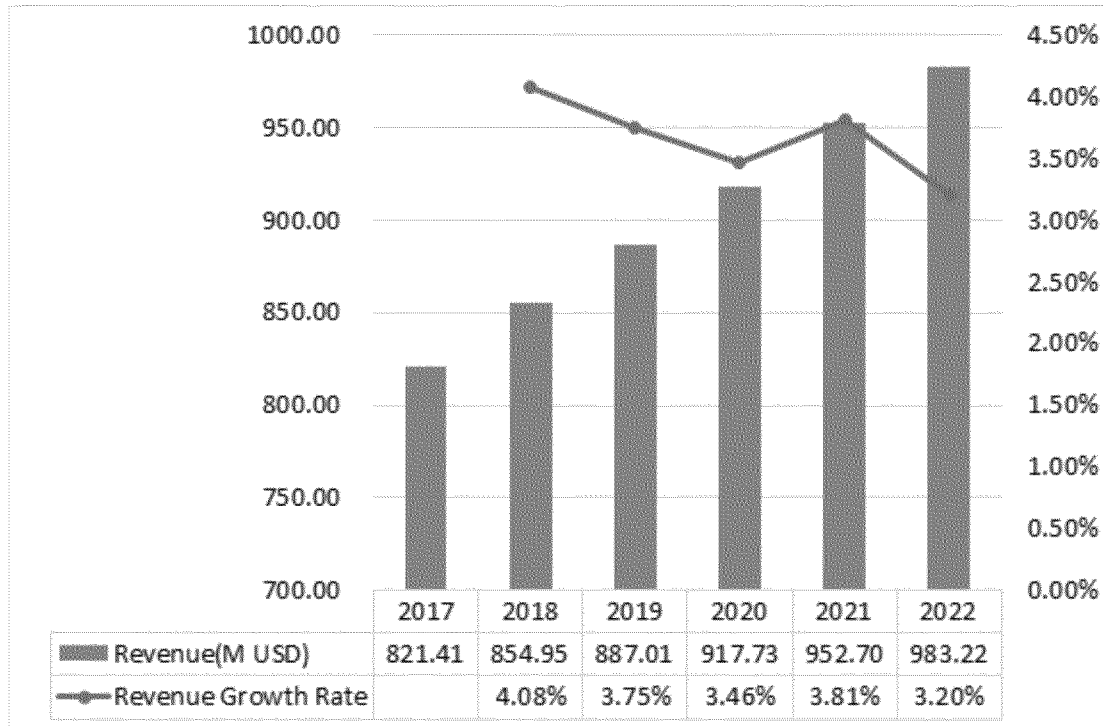
### 1.4.1 North America Status and Prospect (2012-2022)

**Figure North America Paint Remover Revenue (M USD) and Growth Rate (2012-2017)**



Source: QYR Chemical & Material Research Center, Feb 2017

**Figure North America Paint Remover Revenue (M USD) and Growth Rate (2017-2022)**

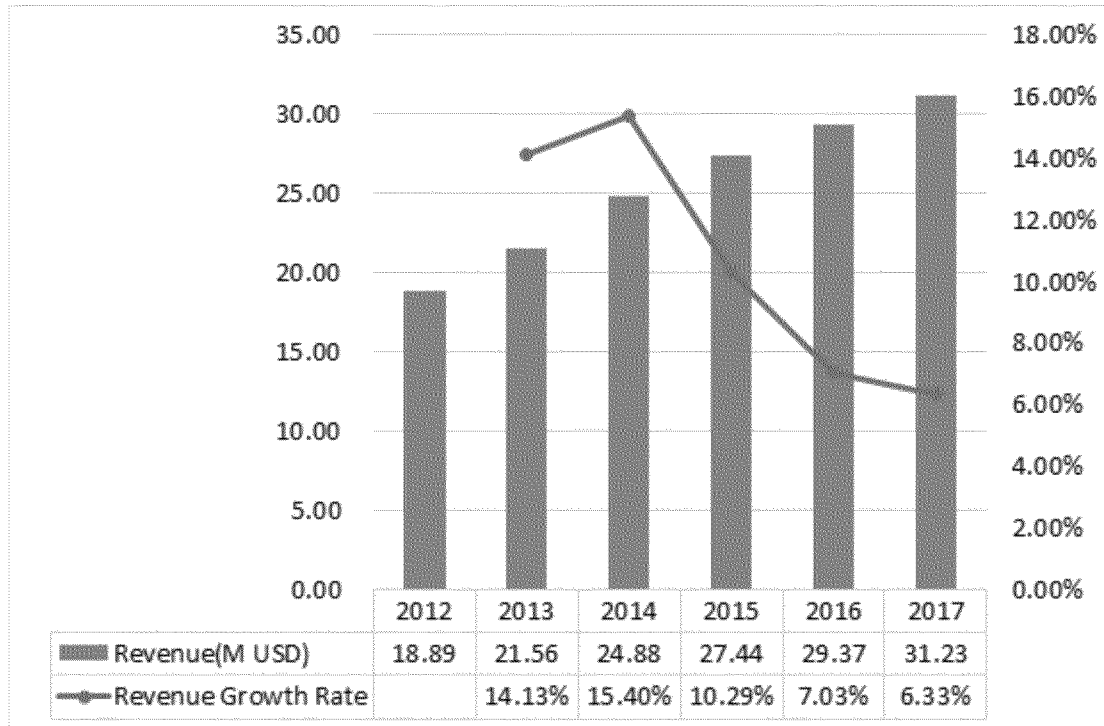


Source: QYR Chemical & Material Research Center, Feb 2017



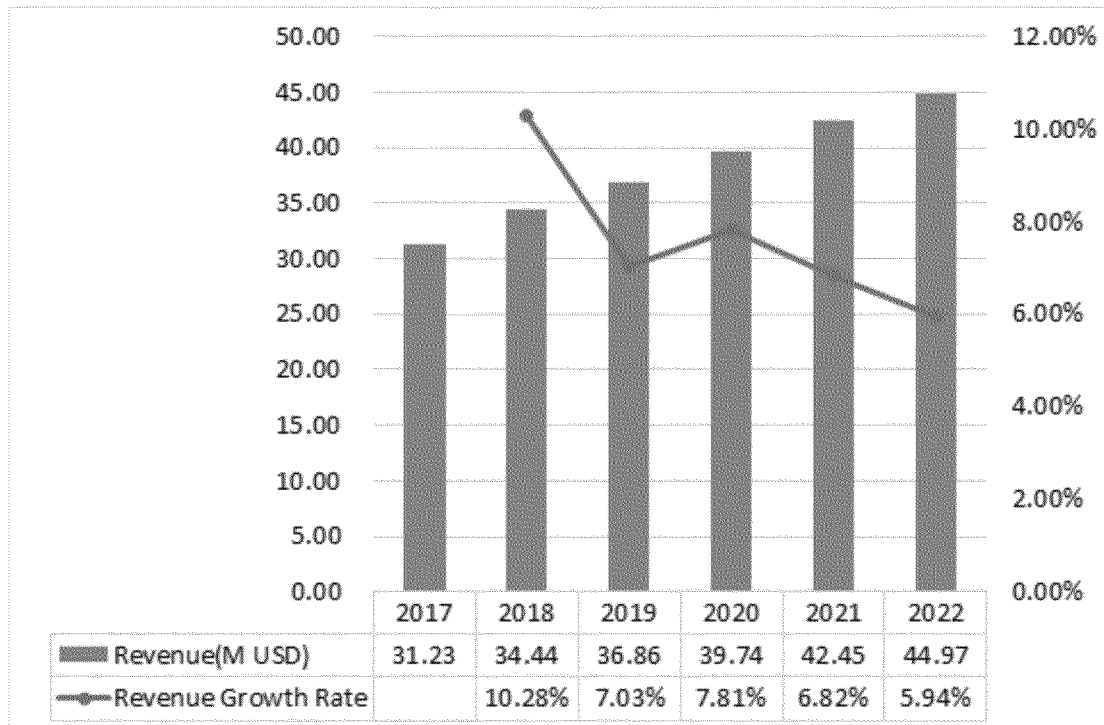
## 1.4.2 China Status and Prospect (2012-2022)

**Figure China Paint Remover Revenue (M USD) and Growth Rate (2012-2017)**



Source: QYR Chemical & Material Research Center, Feb 2017

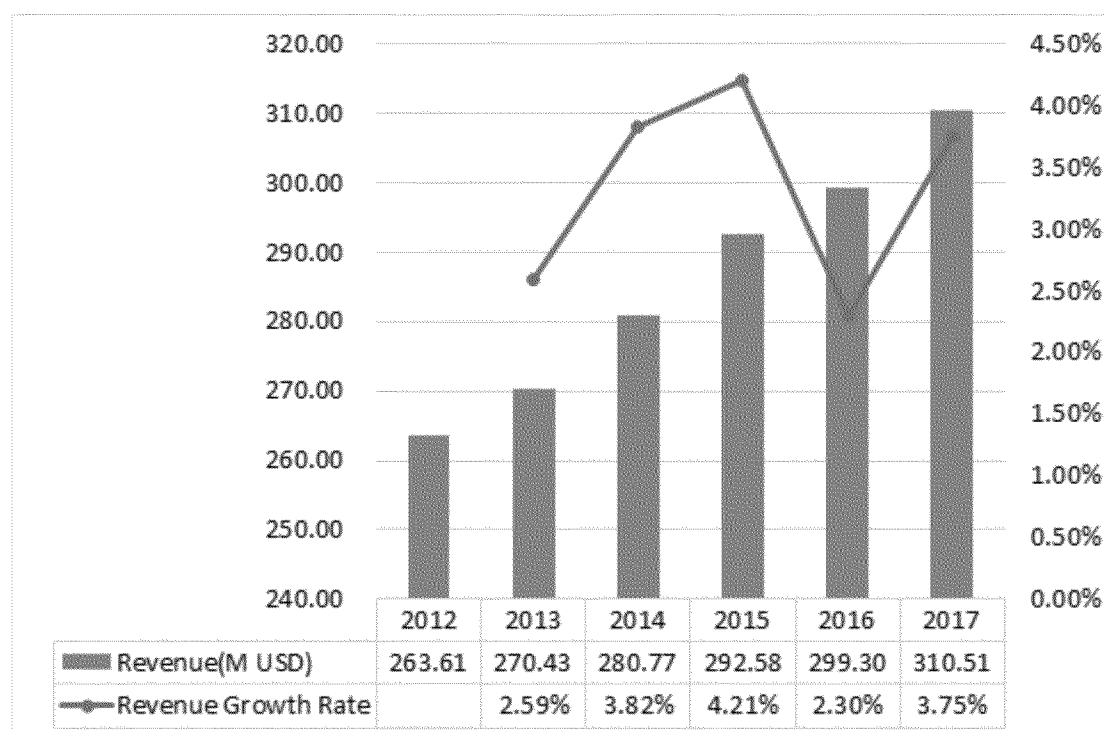
**Figure China Paint Remover Revenue (M USD) and Growth Rate (2017-2022)**



Source: QYR Chemical & Material Research Center, Feb 2017

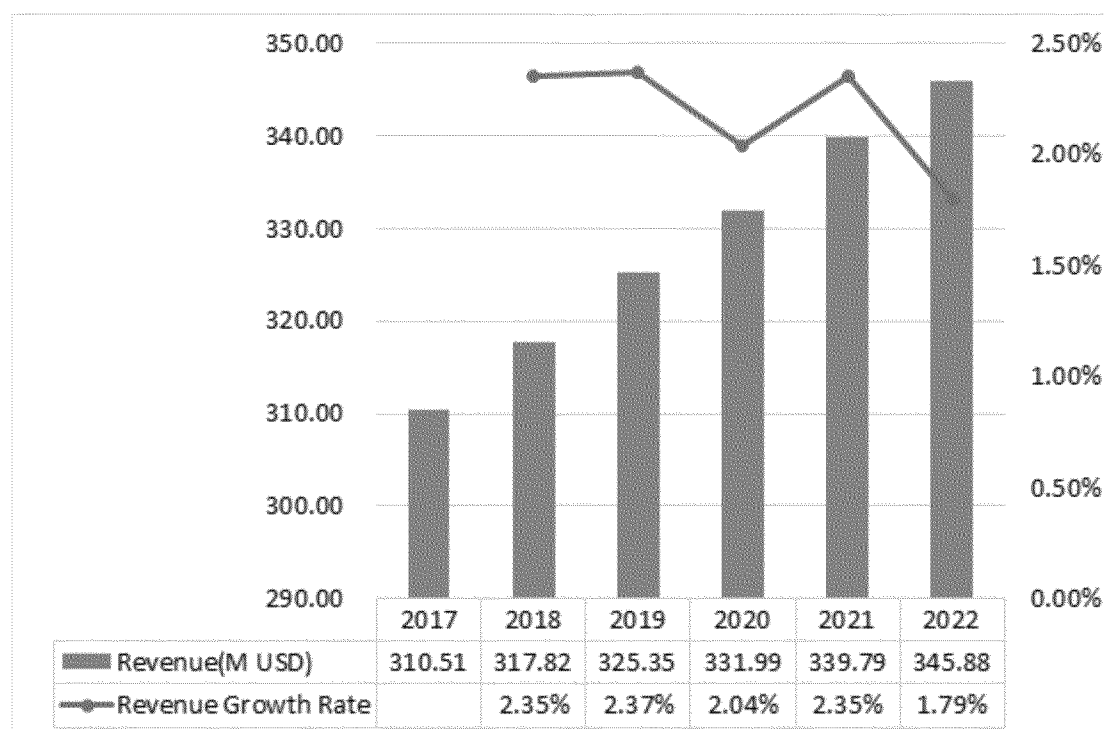
### 1.4.3 Europe Status and Prospect (2012-2022)

**Figure Europe Paint Remover Revenue (M USD) and Growth Rate (2012-2017)**



Source: QYR Chemical & Material Research Center, Feb 2017

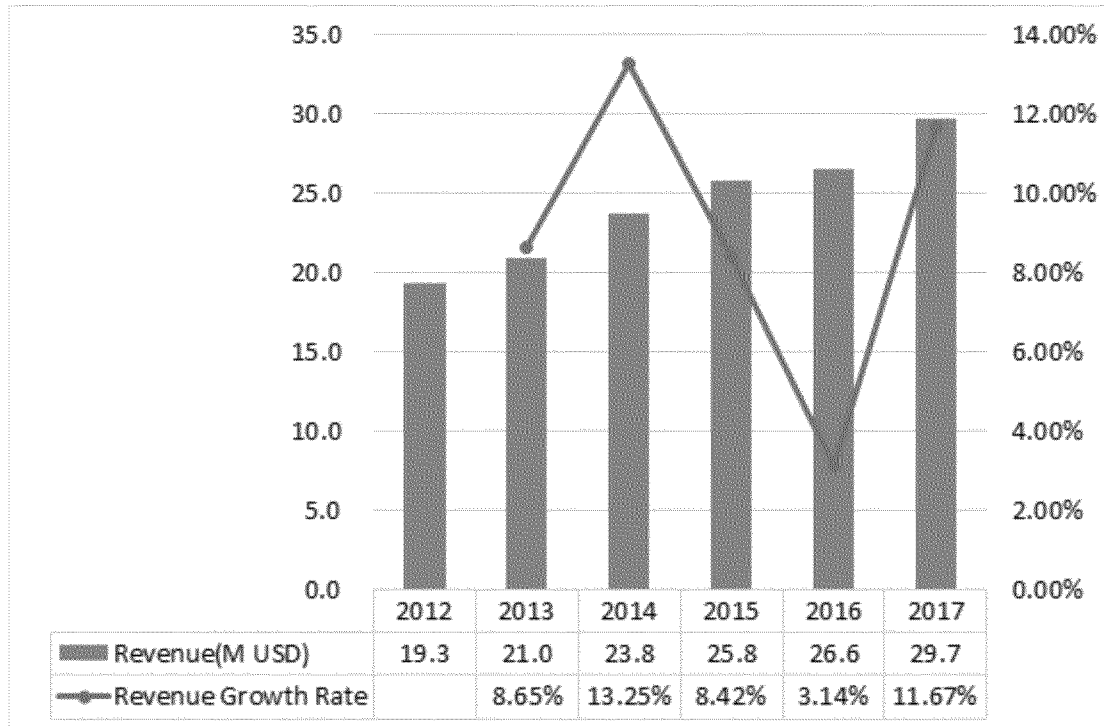
**Figure Europe Paint Remover Revenue (M USD) and Growth Rate (2017-2022)**



Source: QYR Chemical & Material Research Center, Feb 2017

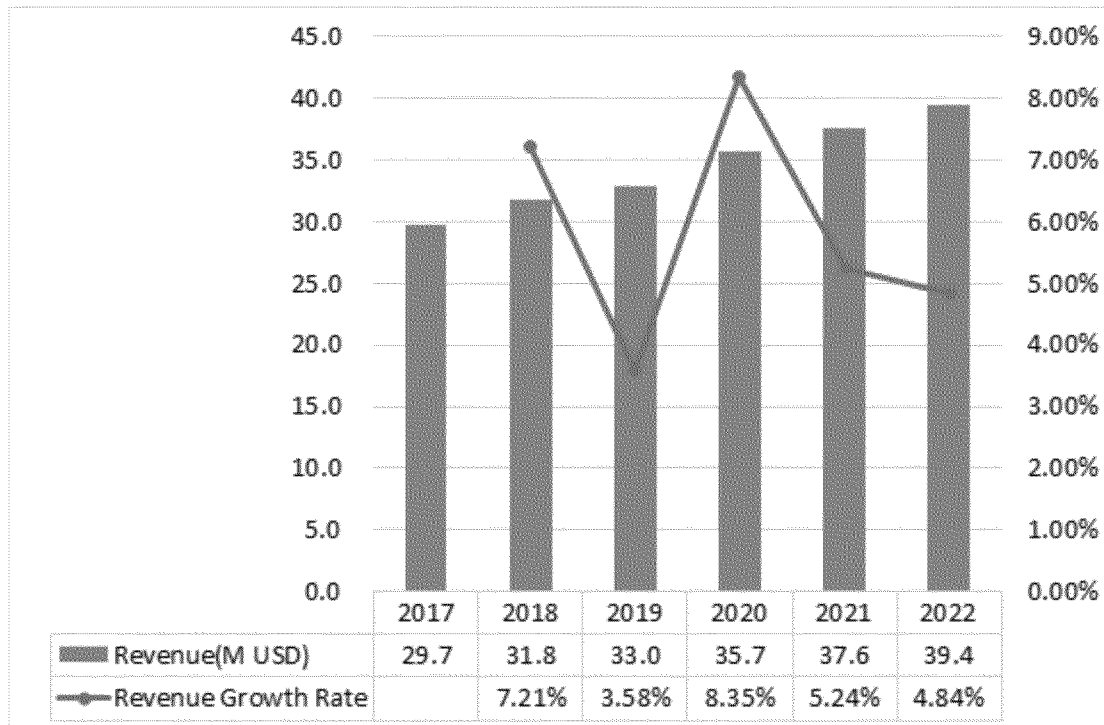
### 1.4.4 Japan Status and Prospect (2012-2022)

**Figure Japan Paint Remover Revenue (M USD) and Growth Rate (2012-2017)**



Source: QYR Chemical & Material Research Center, Feb 2017

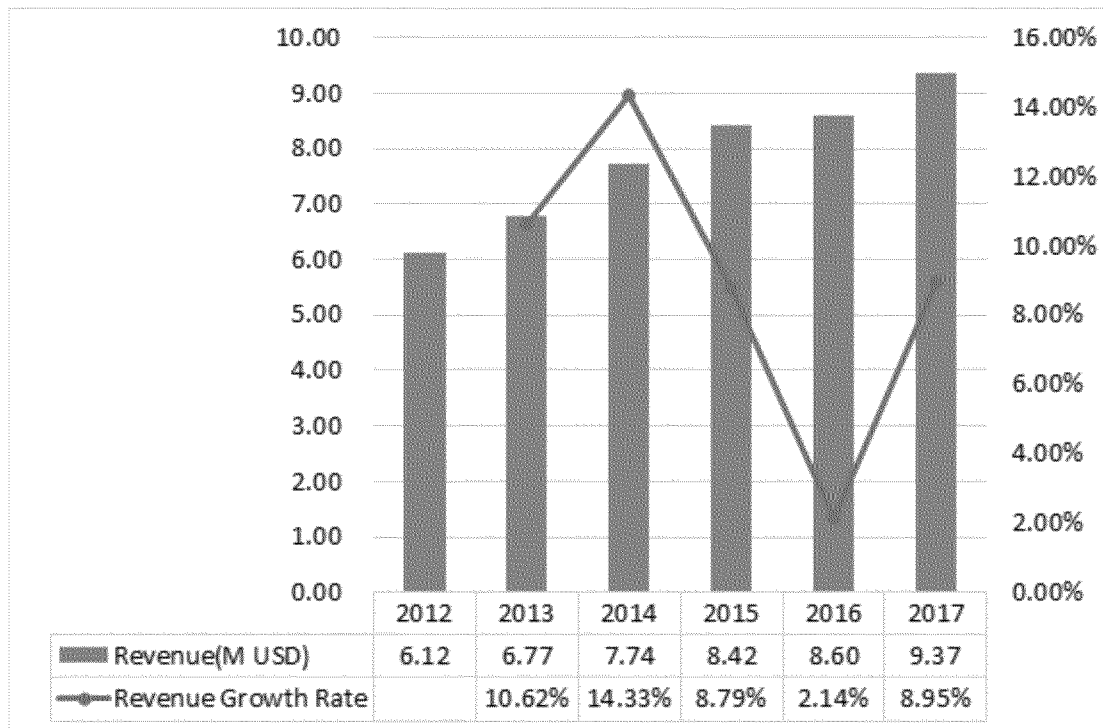
**Figure Japan Paint Remover Revenue (M USD) and Growth Rate (2017-2022)**



Source: QYR Chemical & Material Research Center, Feb 2017

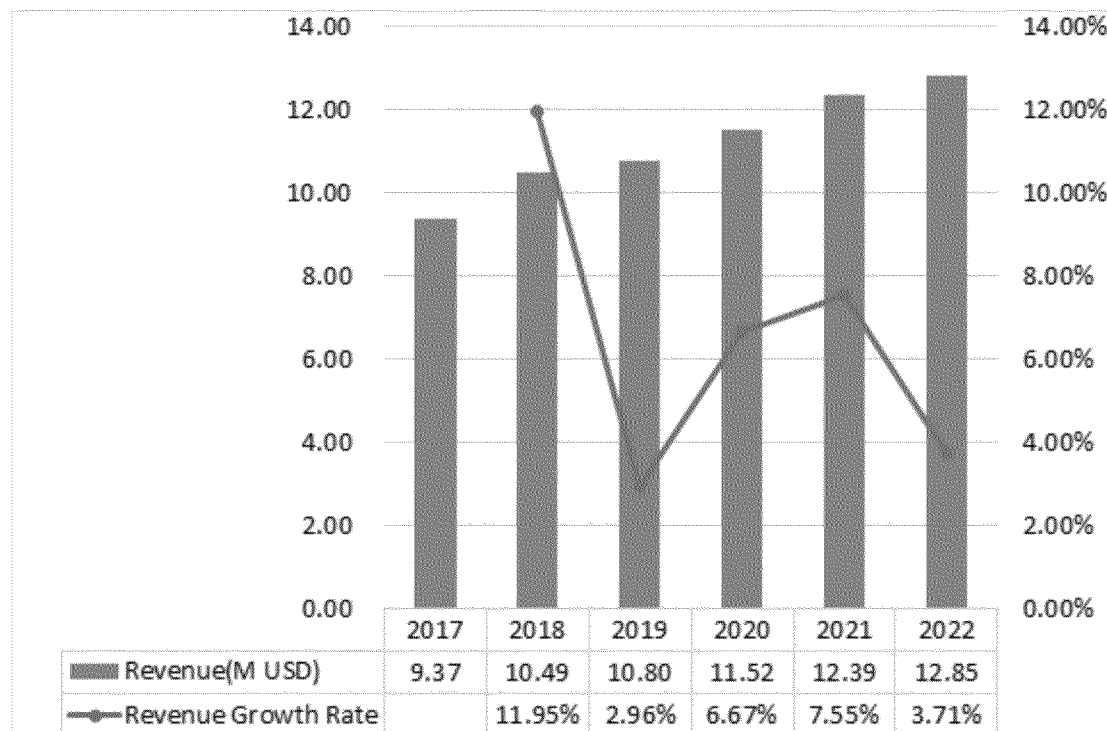
### 1.4.5 Southeast Asia Status and Prospect (2012-2022)

**Figure Southeast Asia Paint Remover Revenue (M USD) and Growth Rate (2012-2017)**



Source: QYR Chemical & Material Research Center, Feb 2017

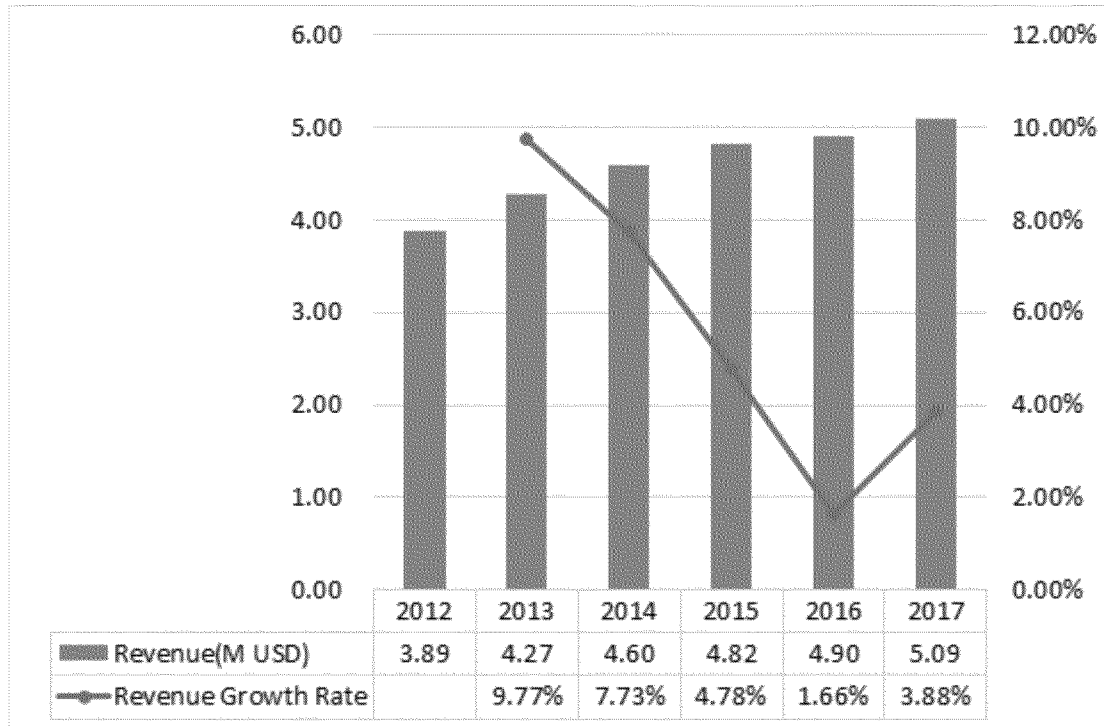
**Figure Southeast Asia Paint Remover Revenue (M USD) and Growth Rate (2017-2022)**



Source: QYR Chemical & Material Research Center, Feb 2017

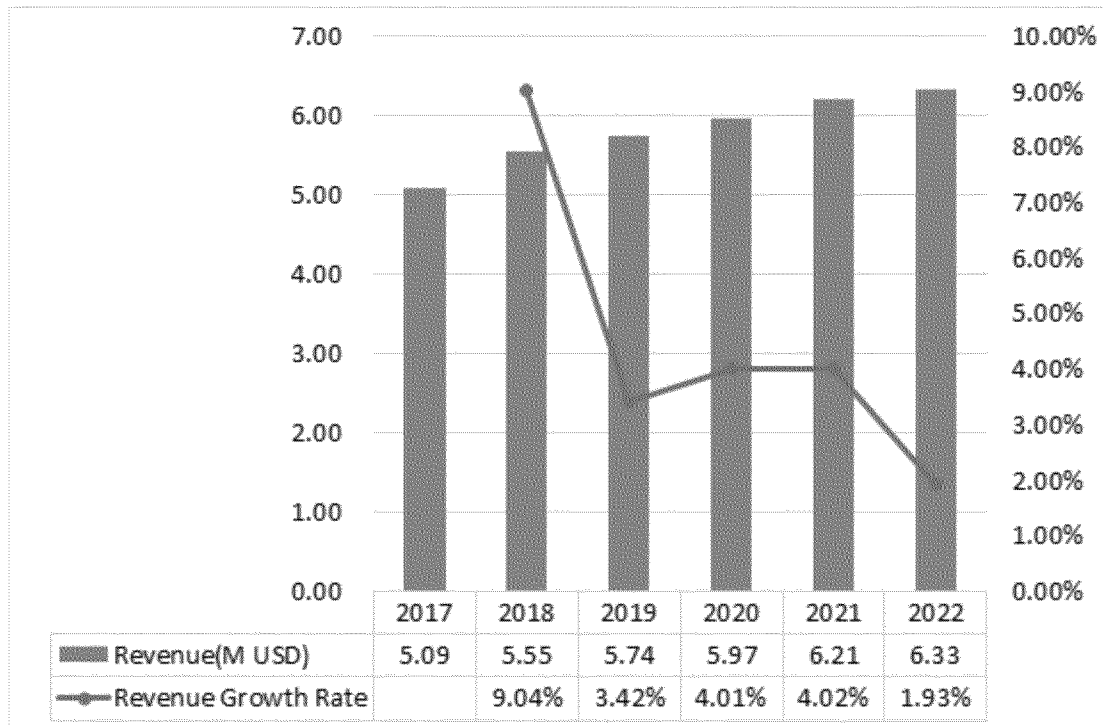
## 1.4.6 India Status and Prospect (2012-2022)

**Figure India Paint Remover Revenue (M USD) and Growth Rate (2012-2017)**



Source: QYR Chemical & Material Research Center, Feb 2017

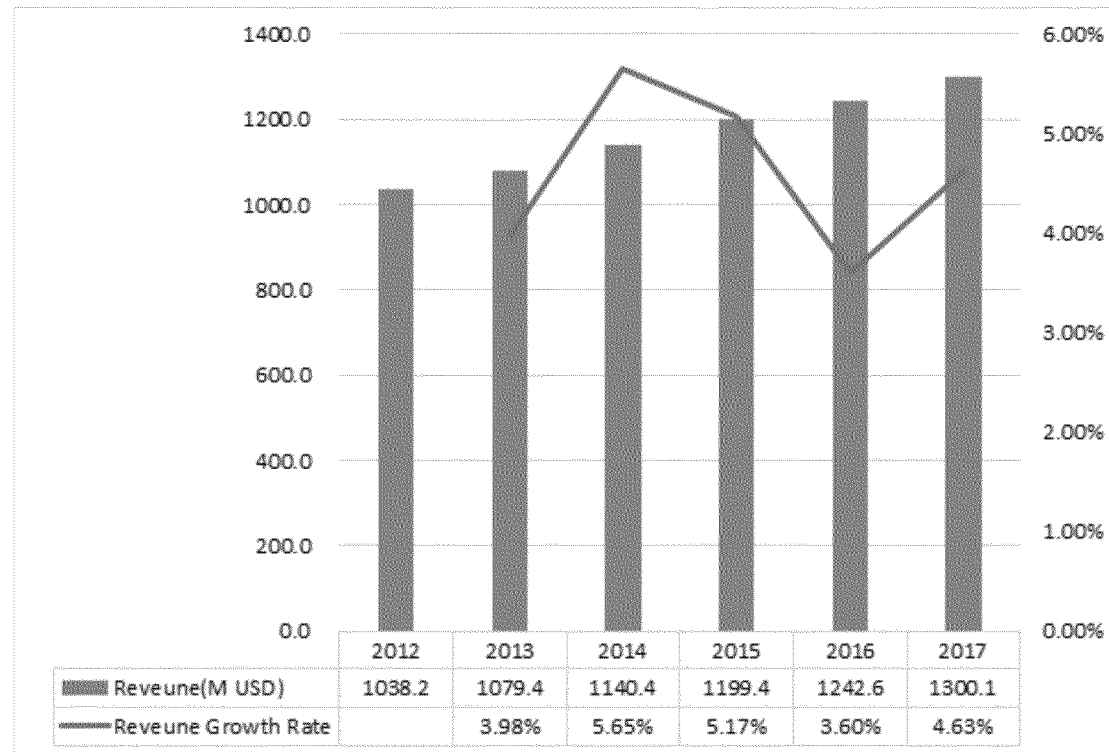
**Figure India Paint Remover Revenue (M USD) and Growth Rate (2017-2022)**



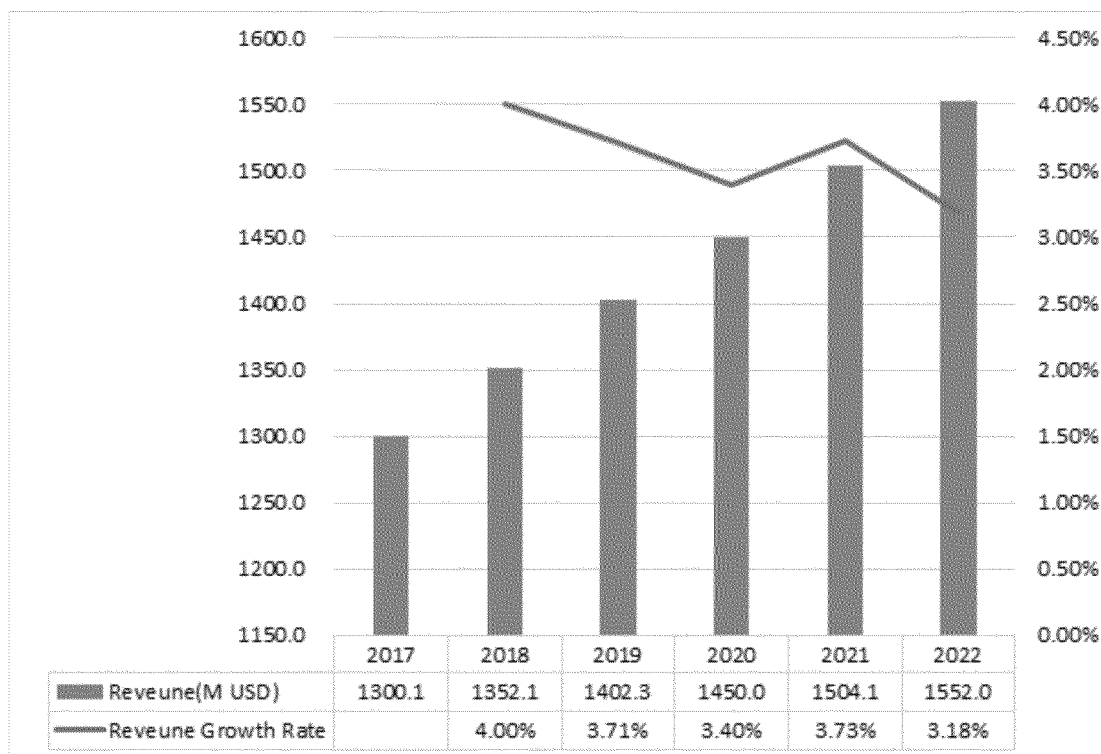
Source: QYR Chemical & Material Research Center, Feb 2017

## 1.5 Global Market Size (Value) of Paint Remover (2012-2022)

Figure Global Paint Remover Revenue (M USD) and Growth Rate (2012-2017)



Source: QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Revenue (M USD) and Growth Rate (2017-2022)**

Source: QYR Chemical & Material Research Center, Feb 2017



## 2 Global Paint Remover Market

### Competition by Manufacturers

#### 2.1 Global Paint Remover Capacity, Production and Share by Manufacturers (2015 and 2016)

**Table Global Paint Remover Capacity of Key Manufacturers(2015 and 2016)(MT)**

	2015	2016
WM Barr	10000	10000
Savogran	8500	9000
Dumond Chemicals	8500	8800
Absolute Coatings	7000	7500
Fiberlock Technologies	6500	7000
Sunnyside	6000	6200
Packaging Service Co.	5500	6000
Motsenbocker	4200	4500
Akzonobel	4500	5000
Henkel	4000	4200
3M	3800	4000
Green Products	2800	3000
3X: Chemistry	4000	4000
Franmar Chemical	2500	2800
PPG (PPG Aerospace)	2400	2400
United Gilsonite Labs	2200	2200
Formby's	2400	2600
GSP	2000	2000
Certilab	1200	1500
Cirrus	1800	2000
ITW Dymon	1200	1400
Rust-Oleum	1000	1000
EcoProCote	1000	1100
EZ Strip	800	850
Sansher Corporation	1100	1200
Auschem	650	720
Kimetsan Group	550	600
Changsha Guterui	1500	1500
TIMEASY	1200	1250
BODE	1100	1100
Hairi Cleaning	700	800

DOMIN Chemical	500	550
Others	63880	64630
Total	164980	171400

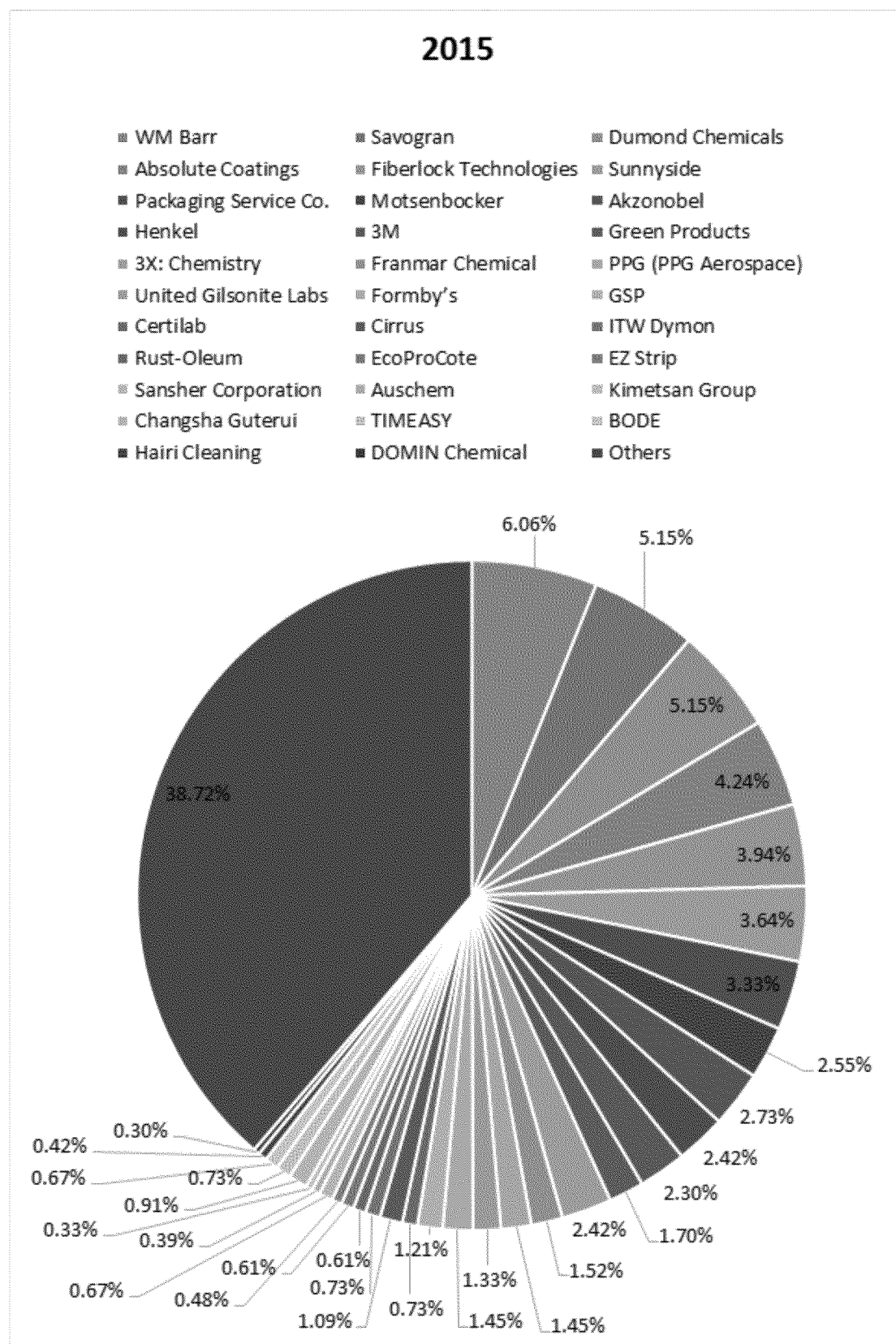
Source: Above companies; QYR Chemical & Material Research Center, Feb 2017

**Table Global Paint Remover Capacity Market Share of Key Manufacturers (2015 and 2016)**

	2015	2016
WM Barr	6.06%	5.83%
Savogran	5.15%	5.25%
Dumond Chemicals	5.15%	5.13%
Absolute Coatings	4.24%	4.38%
Fiberlock Technologies	3.94%	4.08%
Sunnyside	3.64%	3.62%
Packaging Service Co.	3.33%	3.50%
Motsenbocker	2.55%	2.63%
Akzonobel	2.73%	2.92%
Henkel	2.42%	2.45%
3M	2.30%	2.33%
Green Products	1.70%	1.75%
3X: Chemistry	2.42%	2.33%
Franmar Chemical	1.52%	1.63%
PPG (PPG Aerospace)	1.45%	1.40%
United Gilsonite Labs	1.33%	1.28%
Formby's	1.45%	1.52%
GSP	1.21%	1.17%
Certilab	0.73%	0.88%
Cirrus	1.09%	1.17%
ITW Dymon	0.73%	0.82%
Rust-Oleum	0.61%	0.58%
EcoProCote	0.61%	0.64%
EZ Strip	0.48%	0.50%
Sansher Corporation	0.67%	0.70%
Auschem	0.39%	0.42%
Kimetsan Group	0.33%	0.35%
Changsha Guterui	0.91%	0.88%
TIMEASY	0.73%	0.73%
BODE	0.67%	0.64%
Hairi Cleaning	0.42%	0.47%
DOMIN Chemical	0.30%	0.32%
Others	38.72%	37.71%

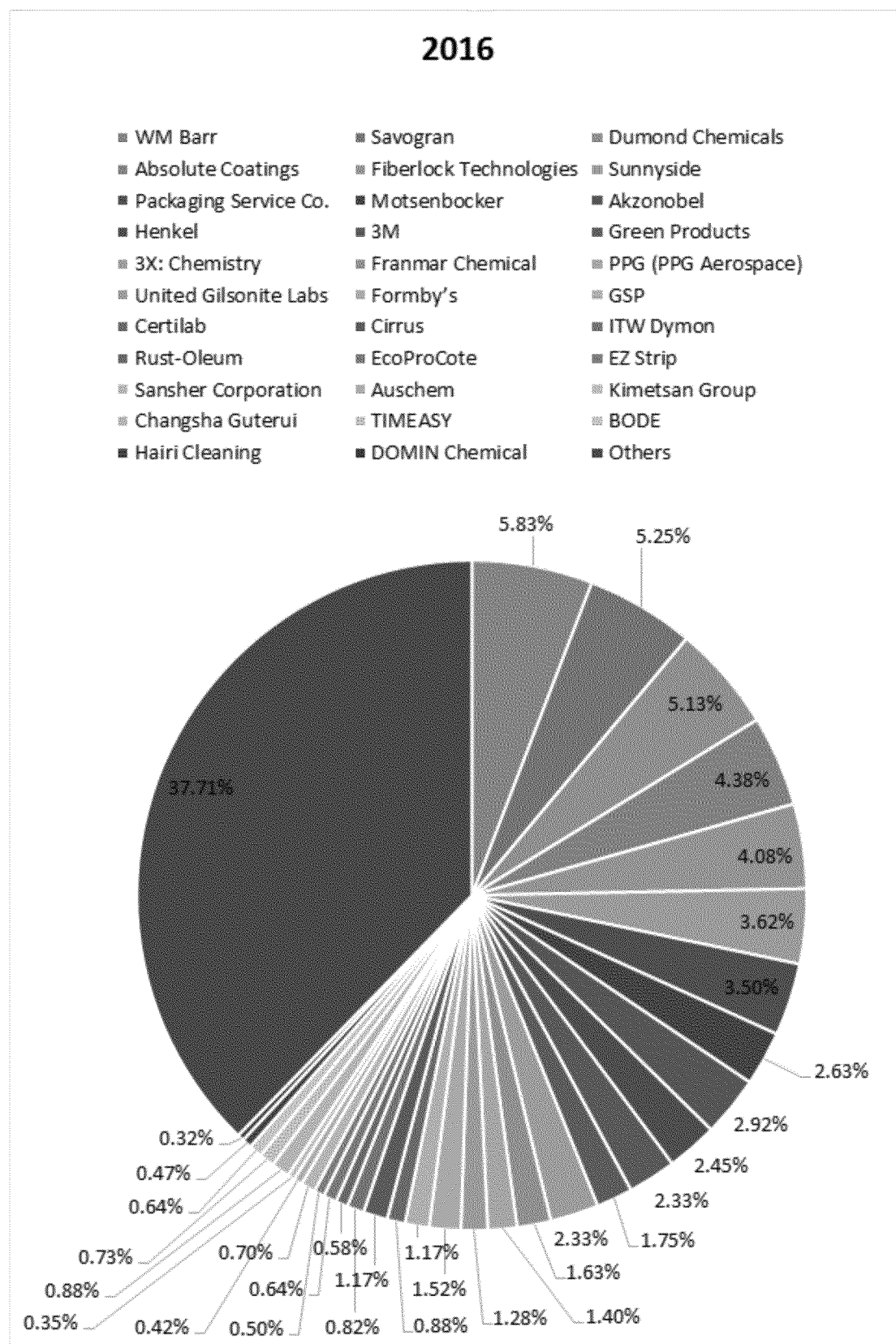
Source: Above companies; QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Capacity of Key Manufacturers in 2015**



Source: Above companies; QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Capacity of Key Manufacturers in 2016**



Source: Above companies; QYR Chemical & Material Research Center, Feb 2017

**Table Global Paint Remover Production of Key Manufacturers (2015 and 2016)  
(MT)**

	2015	2016
WM Barr	7892	8116
Savogran	6850	7088
Dumond Chemicals	6454	7016
Absolute Coatings	5873	6125
Fiberlock Technologies	5323	5840
Sunnyside	4890	5022
Packaging Service Co.	4452	4956
Motsenbocker	3387	3760
Akzonobel	3712	4027
Henkel	3385	3532
3M	3068	3271
Green Products	2302	2437
3X: Chemistry	3265	3384
Franmar Chemical	2113	2307
PPG (PPG Aerospace)	1848	1917
United Gilsonite Labs	1732	1838
Formby's	1906	2145
GSP	1579	1691
Certilab	985	1064
Cirrus	1445	1509
ITW Dymon	1006	1114
Rust-Oleum	706	787
EcoProCote	812	865
EZ Strip	638	703
Sansher Corporation	873	946
Auschem	515	596
Kimetsan Group	431	483
Changsha Guterui	1152	1220
TIMEASY	939	1005
BODE	844	908
Hairi Cleaning	574	648
DOMIN Chemical	406	454
Others	50734	51856
Total	132091	138630

Source: Above companies; QYR Chemical &amp; Material Research Center, Feb 2017

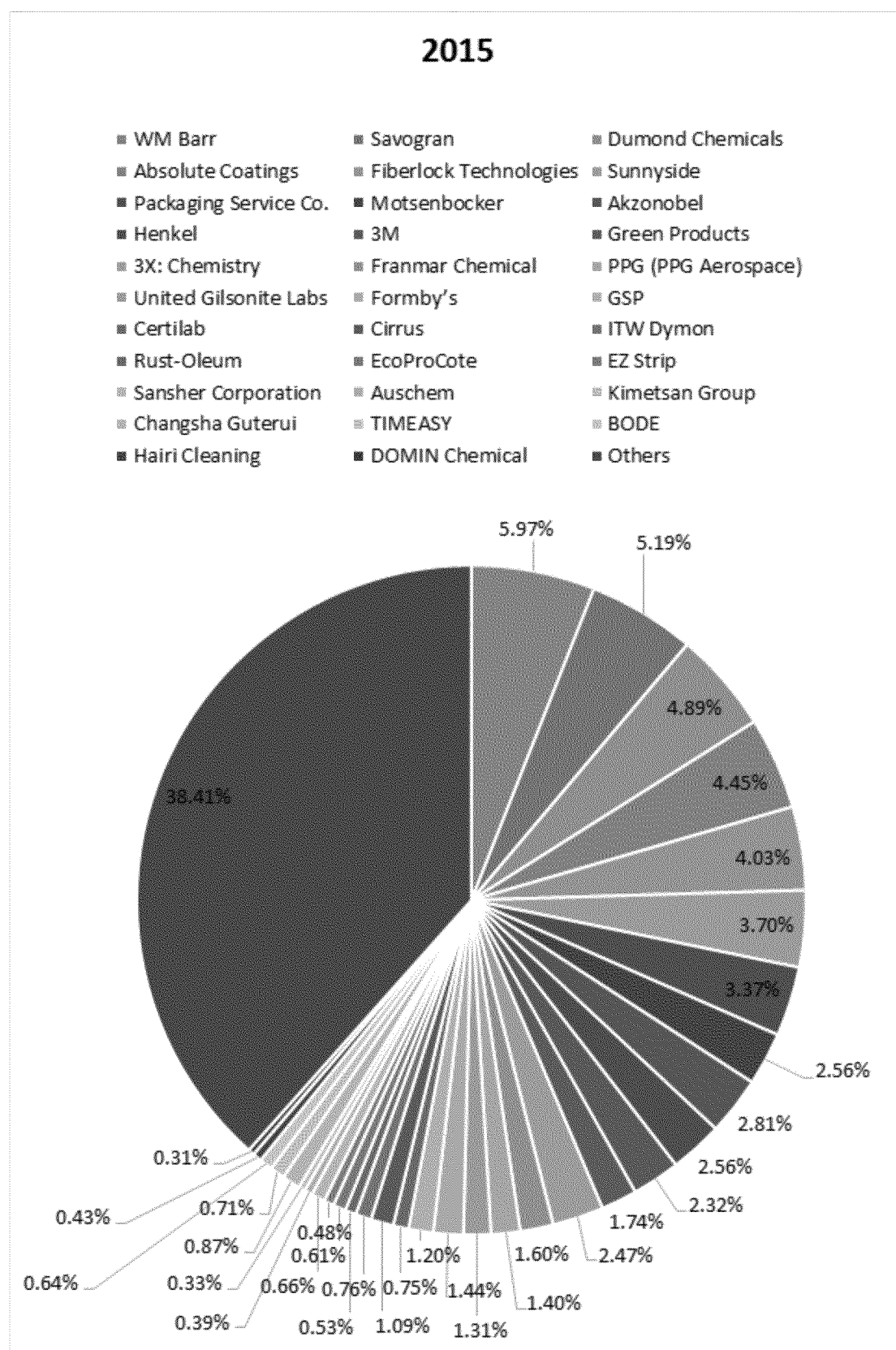
**Table Global Paint Remover Production Share by Manufacturers (2015 and 2016)**

	2015	2016
WM Barr	5.97%	5.85%
Savogran	5.19%	5.11%

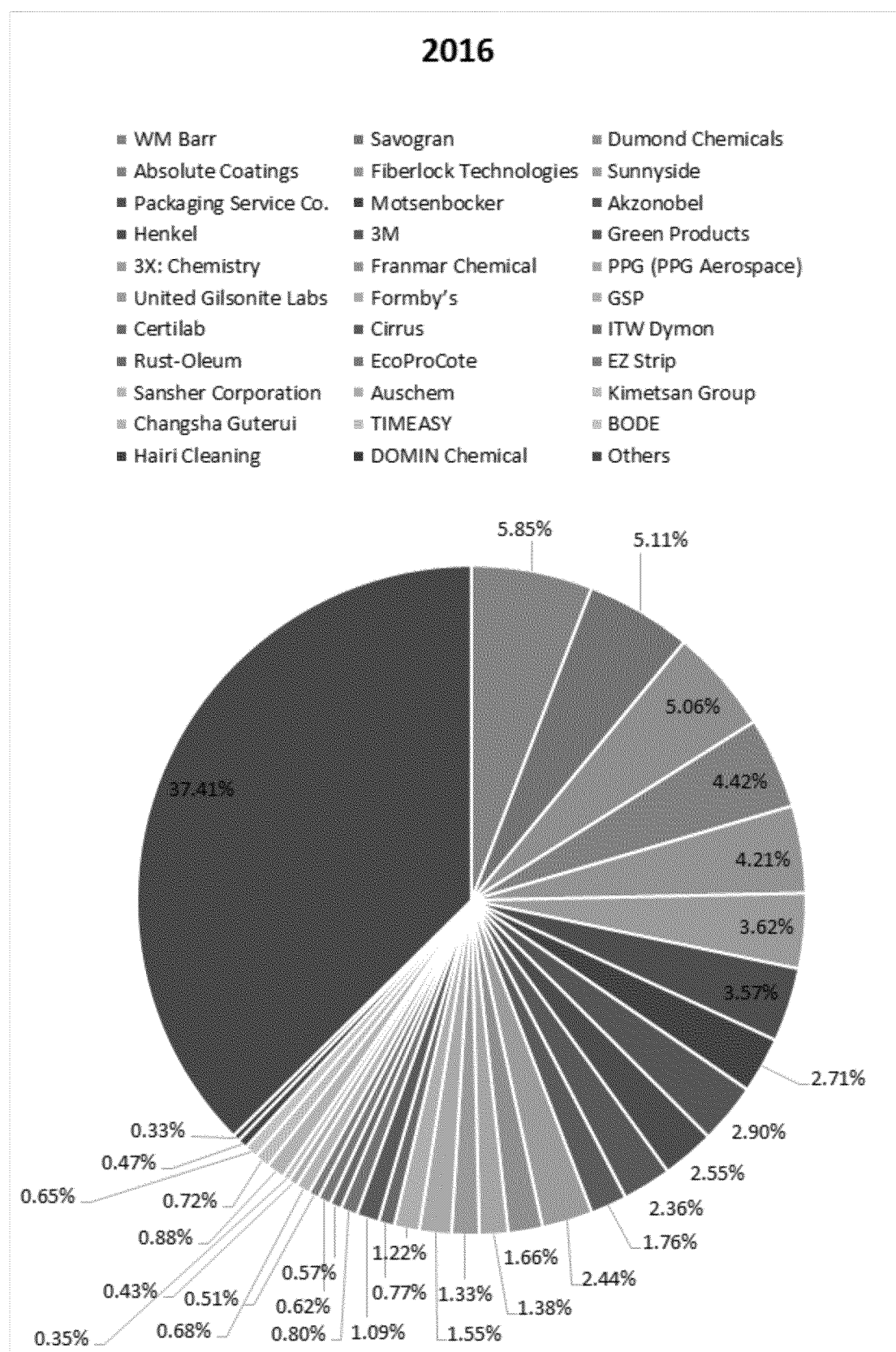
Dumond Chemicals	4.89%	5.06%
Absolute Coatings	4.45%	4.42%
Fiberlock Technologies	4.03%	4.21%
Sunnyside	3.70%	3.62%
Packaging Service Co.	3.37%	3.57%
Motsenbocker	2.56%	2.71%
Akzonobel	2.81%	2.90%
Henkel	2.56%	2.55%
3M	2.32%	2.36%
Green Products	1.74%	1.76%
3X: Chemistry	2.47%	2.44%
Franmar Chemical	1.60%	1.66%
PPG (PPG Aerospace)	1.40%	1.38%
United Gilsonite Labs	1.31%	1.33%
Formby's	1.44%	1.55%
GSP	1.20%	1.22%
Certilab	0.75%	0.77%
Cirrus	1.09%	1.09%
ITW Dymon	0.76%	0.80%
Rust-Oleum	0.53%	0.57%
EcoProCote	0.61%	0.62%
EZ Strip	0.48%	0.51%
Sansher Corporation	0.66%	0.68%
Auschem	0.39%	0.43%
Kimetsan Group	0.33%	0.35%
Changsha Guterui	0.87%	0.88%
TIMEASY	0.71%	0.72%
BODE	0.64%	0.65%
Hairi Cleaning	0.43%	0.47%
DOMIN Chemical	0.31%	0.33%
Others	38.41%	37.41%

Source: Above companies; QYR Chemical & Material Research Center, Feb 2017

**Figure 2015 Paint Remover Production Share by Manufacturers**



Source: Above companies; QYR Chemical & Material Research Center, Feb 2017

**Figure 2016 Paint Remover Production Share by Manufacturers**


Source: Above companies; QYR Chemical & Material Research Center, Feb 2017



## 2.2 Global Paint Remover Revenue and Share by Manufacturers (2015 and 2016)

**Table Global Paint Remover Revenue (M USD) by Manufacturers (2015 and 2016)**

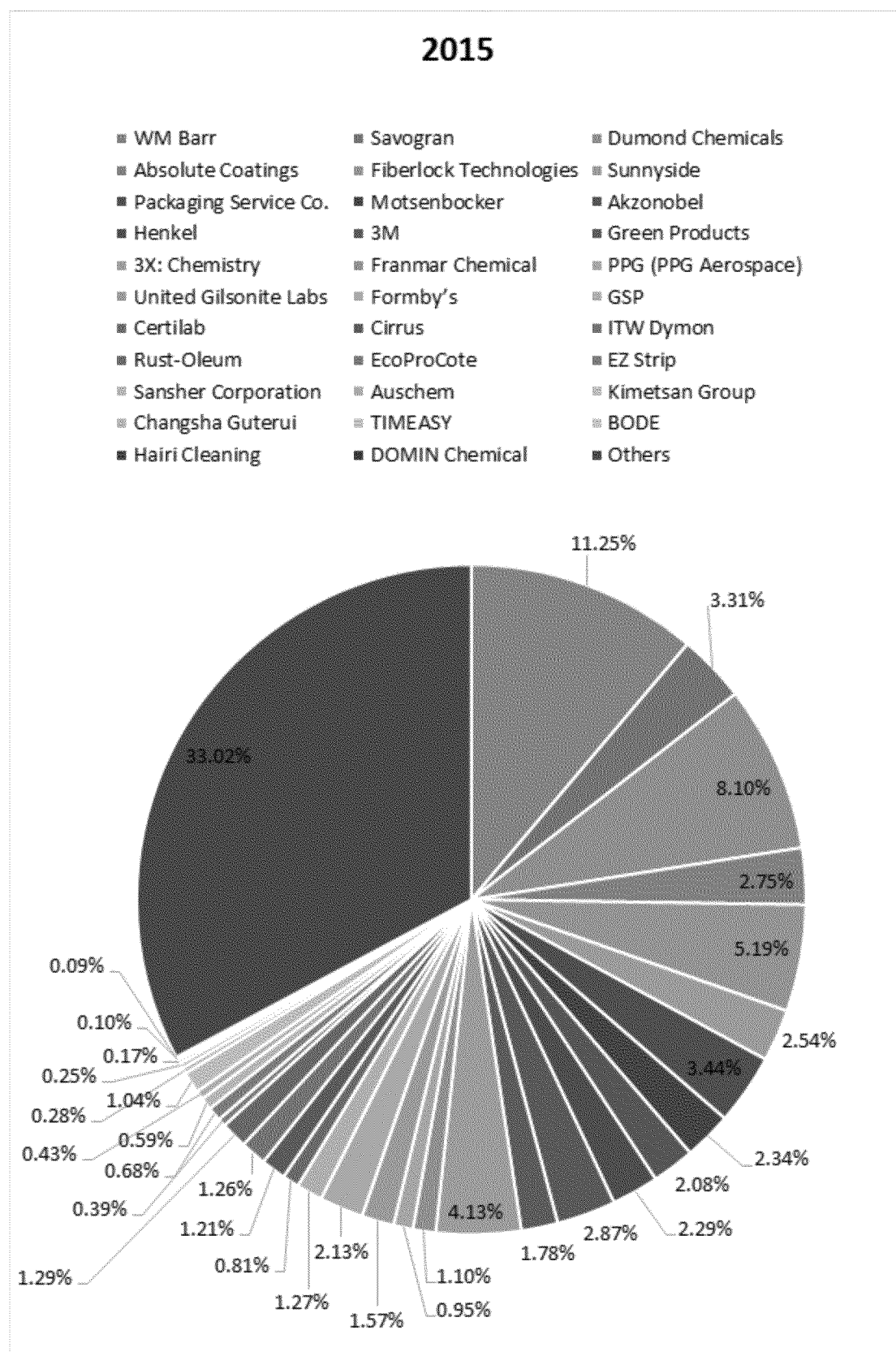
Company	2015	2016
WM Barr	139.85	142.88
Savogran	41.18	42.17
Dumond Chemicals	100.68	109.13
Absolute Coatings	34.15	35.49
Fiberlock Technologies	64.43	70.58
Sunnyside	31.58	32.27
Packaging Service Co.	42.75	47.46
Motsenbocker	29.03	32.11
Akzonobel	25.84	27.90
Henkel	28.47	29.63
3M	35.70	38.00
Green Products	22.07	22.44
3X: Chemistry	51.28	53.07
Franmar Chemical	13.69	14.91
PPG (PPG Aerospace)	11.82	12.21
United Gilsonite Labs	19.50	20.62
Formby's	26.45	29.71
GSP	15.82	16.71
Certilab	10.05	10.81
Cirrus	14.98	15.60
ITW Dymon	15.64	17.29
Rust-Oleum	16.06	17.91
EcoProCote	4.82	5.12
EZ Strip	8.42	9.26
Sansher Corporation	7.39	7.98
Auschem	5.31	6.11
Kimetsan Group	4.25	4.71
Changsha Guterui	3.50	3.68
TIMEASY	3.07	3.25
BODE	2.11	2.25
Hairi Cleaning	1.19	1.33
DOMIN Chemical	1.15	1.27
Others	410.35	416.21
Total	1242.58	1300.07

Source: Above companies; QYR Chemical & Material Research Center, Feb 2017

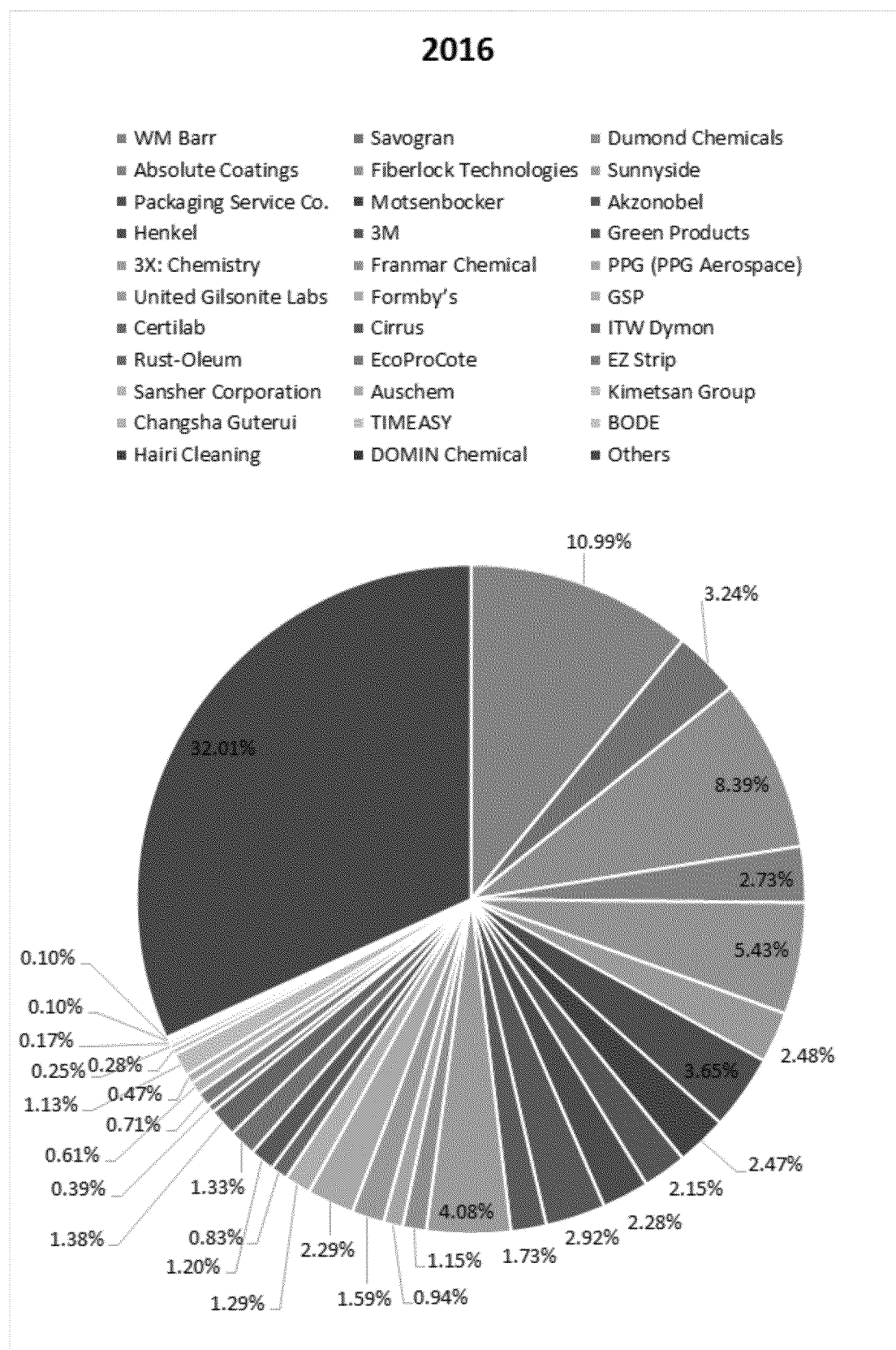
**Table Global Paint Remover Revenue Share by Manufacturers (2015 and 2016)**

<b>Company</b>	<b>2015</b>	<b>2016</b>
WM Barr	11.25%	10.99%
Savogran	3.31%	3.24%
Dumond Chemicals	8.10%	8.39%
Absolute Coatings	2.75%	2.73%
Fiberlock Technologies	5.19%	5.43%
Sunnyside	2.54%	2.48%
Packaging Service Co.	3.44%	3.65%
Motsenbocker	2.34%	2.47%
Akzonobel	2.08%	2.15%
Henkel	2.29%	2.28%
3M	2.87%	2.92%
Green Products	1.78%	1.73%
3X: Chemistry	4.13%	4.08%
Franmar Chemical	1.10%	1.15%
PPG (PPG Aerospace)	0.95%	0.94%
United Gilsonite Labs	1.57%	1.59%
Formby's	2.13%	2.29%
GSP	1.27%	1.29%
Certilab	0.81%	0.83%
Cirrus	1.21%	1.20%
ITW Dymon	1.26%	1.33%
Rust-Oleum	1.29%	1.38%
EcoProCote	0.39%	0.39%
EZ Strip	0.68%	0.71%
Sansher Corporation	0.59%	0.61%
Auschem	0.43%	0.47%
Kimetsan Group	1.04%	1.13%
Changsha Guterui	0.28%	0.28%
TIMEASY	0.25%	0.25%
BODE	0.17%	0.17%
Hairi Cleaning	0.10%	0.10%
DOMIN Chemical	0.09%	0.10%
Others	33.02%	32.01%

Source: Above companies; QYR Chemical &amp; Material Research Center, Feb 2017

**Table 2015 Global Paint Remover Revenue Share by Manufacturers**

Source: Above companies; QYR Chemical &amp; Material Research Center, Feb 2017

**Table 2016 Global Paint Remover Revenue Share by Manufacturers**

Source: Above companies; QYR Chemical &amp; Material Research Center, Feb 2017

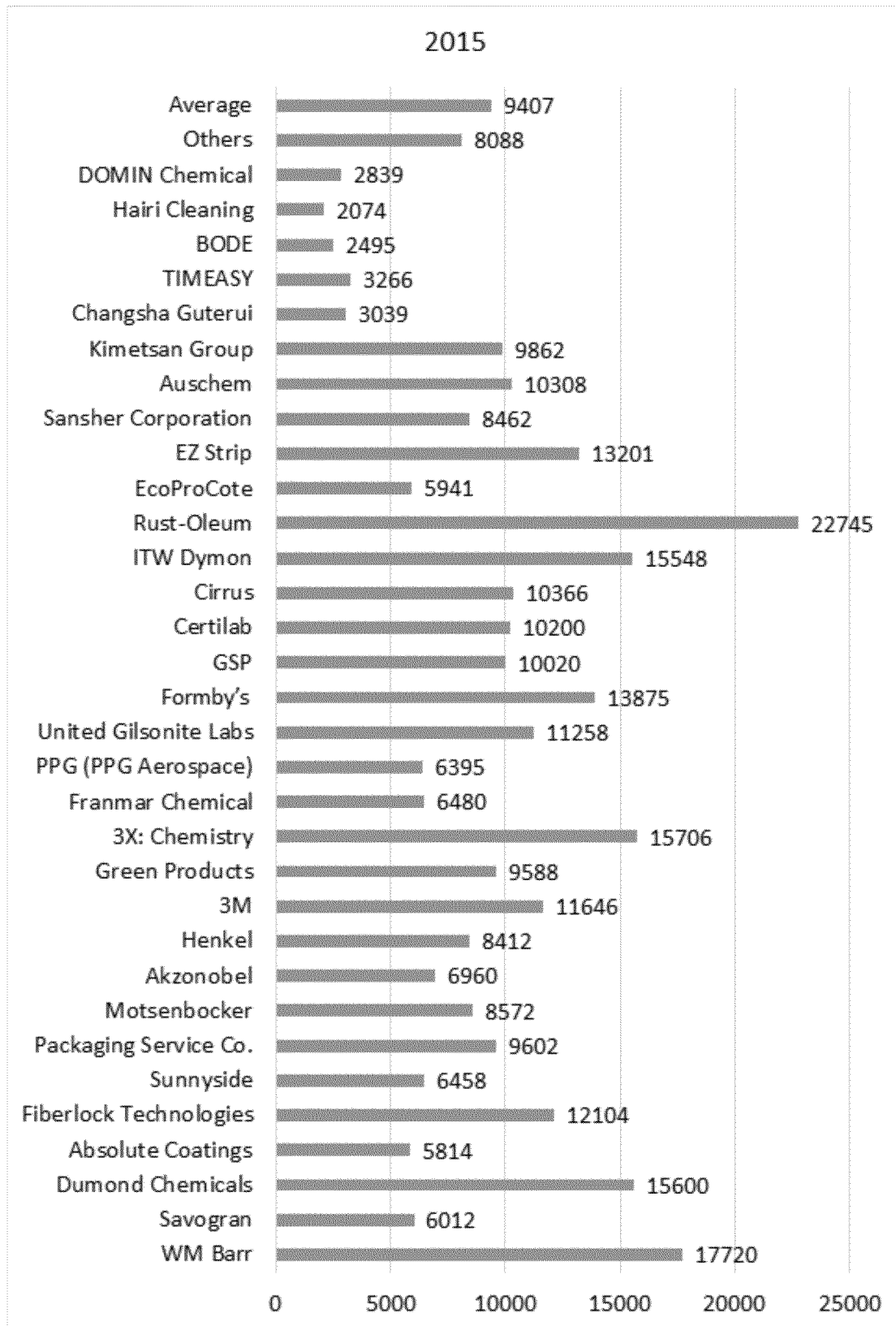
## 2.3 Global Paint Remover Average Price by Manufacturers (2015 and 2016)

**Table Global Market Paint Remover Average Price of Key Manufacturers (2015 and 2016) (USD/MT)**

	2015	2016
WM Barr	17720	17605
Savogran	6012	5950
Dumond Chemicals	15600	15554
Absolute Coatings	5814	5795
Fiberlock Technologies	12104	12086
Sunnyside	6458	6426
Packaging Service Co.	9602	9576
Motsenbocker	8572	8540
Akzonobel	6960	6928
Henkel	8412	8388
3M	11646	11620
Green Products	9588	9207
3X: Chemistry	15706	15682
Franmar Chemical	6480	6461
PPG (PPG Aerospace)	6395	6367
United Gilsonite Labs	11258	11220
Formby's	13875	13852
GSP	10020	9884
Certilab	10200	10156
Cirrus	10366	10341
ITW Dymon	15548	15524
Rust-Oleum	22745	22760
EcoProCote	5941	5916
EZ Strip	13201	13172
Sansher Corporation	8462	8440
Auschem	10308	10252
Kimetsan Group	9862	9751
Changsha Guterui	3039	3015
TIMEASY	3266	3230
BODE	2495	2477
Hairi Cleaning	2074	2046
DOMIN Chemical	2839	2800
Others	8088	8026
Average	9407	9378

Source: Above companies; QYR Chemical & Material Research Center, Feb 2017

**Figure Global Market Paint Remover Average Price of Key Manufacturers in 2015 (USD/MT)**



Source: Above companies; QYR Chemical & Material Research Center, Feb 2017

## 2.4 Manufacturers Paint Remover Manufacturing Headquarter Location

**Table Manufacturers Paint Remover Manufacturing Headquarter Location**

<b>Manufacturers</b>	<b>Headquarter Location</b>
WM Barr	US
Savogran	US
Dumond Chemicals	US
Absolute Coatings	US
Fiberlock Technologies	US
Sunnyside	US
Packaging Service Co.	US
Motsenbocker	US
Akzonobel	US, EU (Netherlands)
Henkel	China, US, EU
3M	US
Green Products	US
3X: Chemistry	US
Franmar Chemical	US
PPG (PPG Aerospace)	US
United Gilsonite Labs	US
Formby's	US
GSP	US
Certilab	Australia, US
Cirrus	UK
ITW Dymon	US
Rust-Oleum	US
EcoProCote	US
EZ Strip	US, UK
Sansher Corporation	US, Canada, Mexico
Auschem	Australia
Kimetsan Group	Turkey
Changsha Guterui	Hunan, China
TIMEASY	Tianjin, China
BODE	Guangzhou, China
Hairi Cleaning	Guangzhou, China
DOMIN Chemical	Guangzhou, China

Source: Above companies; QYR Chemical & Material Research Center, Feb 2017

## 2.5 Paint Remover Market Competitive Situation and Trends

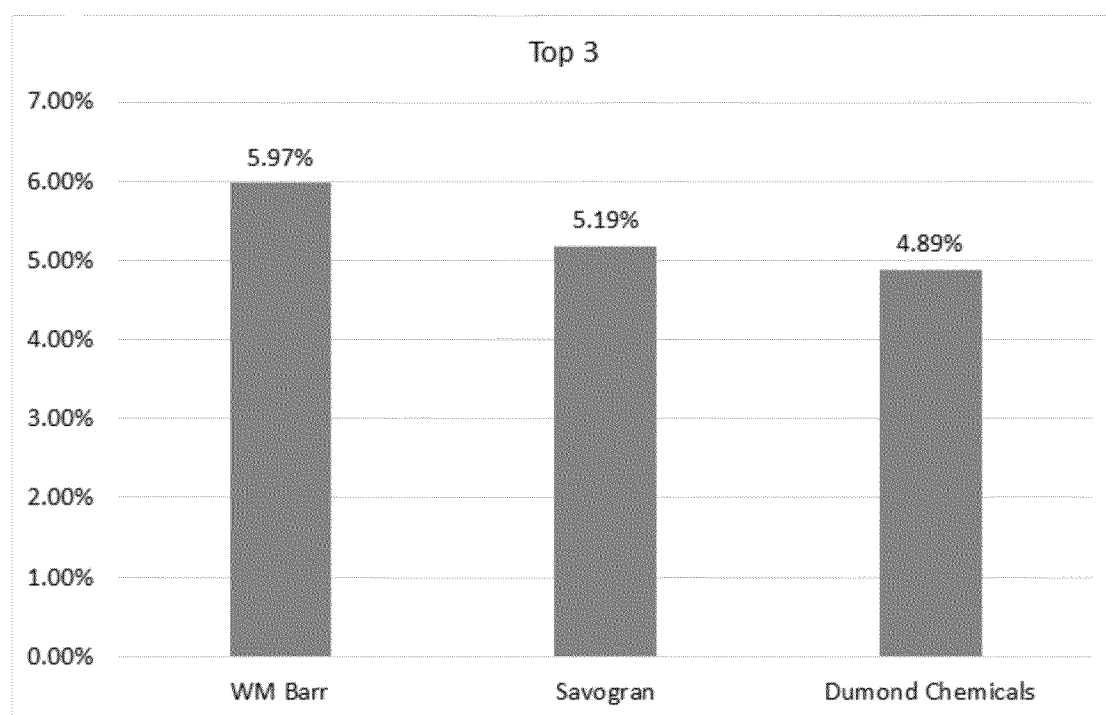
### 2.5.1 Paint Remover Market Share of Top 3 Manufacturers

**Table Paint Remover Production and Market Share of Top 3 Manufacturers (MT)**

	2015	2016
WM Barr	7892	8116
Market Share	5.97%	5.85%
Savogran	6850	7088
Market Share	5.19%	5.11%
Dumond Chemicals	6454	7016
Market Share	4.89%	5.06%

Source: Above companies; QYR Chemical & Material Research Center; Feb 2017

**Figure Paint Remover Market Share of Top 3 Manufacturers**



Source: Above companies; QYR Chemical & Material Research Center; Feb 2017



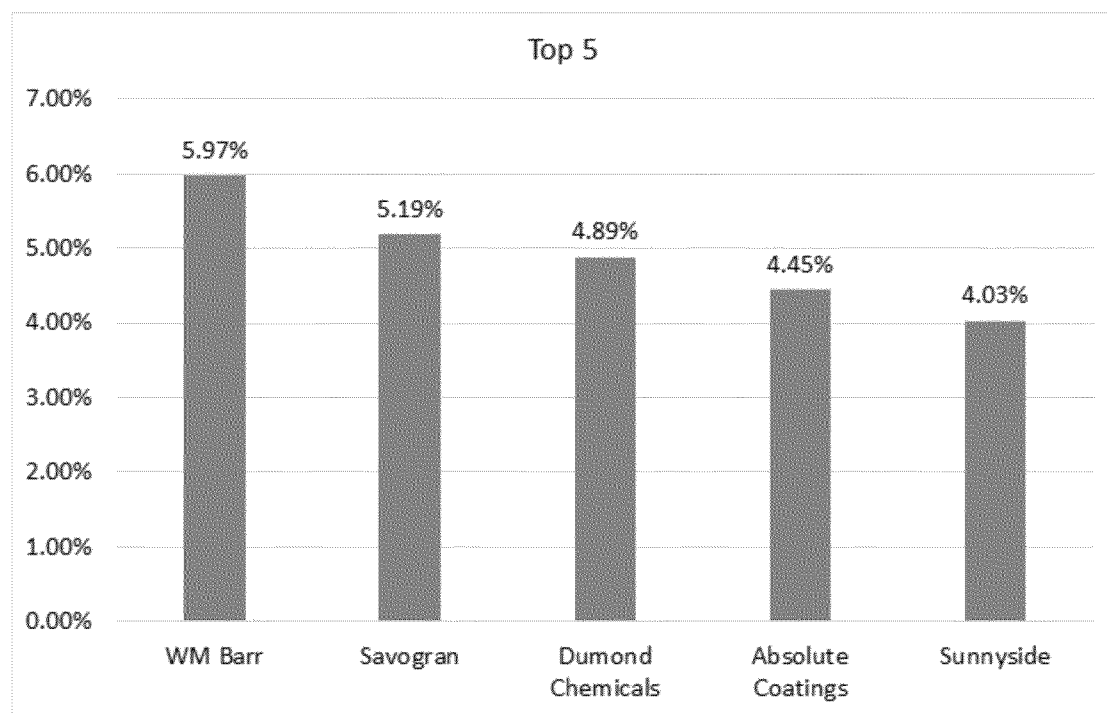
## 2.5.2 Paint Remover Market Share of Top 5 Manufacturers

**Table Paint Remover Production and Market Share of Top 5 Manufacturers (MT)**

	2015	2016
WM Barr	7892	8116
Market Share	5.97%	5.85%
Savogran	6850	7088
Market Share	5.19%	5.11%
Dumond Chemicals	6454	7016
Market Share	4.89%	5.06%
Absolute Coatings	5873	6125
Market Share	4.45%	4.42%
Sunnyside	5323	5840
Market Share	4.03%	4.21%

Source: Above companies; QYR Chemical & Material Research Center, Feb 2017

**Figure Paint Remover Market Share of Top 5 Manufacturers**



Source: Above companies; QYR Chemical & Material Research Center, Feb 2017

## 3 Global Paint Remover Capacity, Production, Revenue (Value) by Regions (2012-2017)

### 3.1 Global Paint Remover Capacity and Market Share by Regions (2012-2017)

**Table Global Paint Remover Capacity by Regions (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
NA	73566	76982	80766	83208	88275	91681
Europe	31048	32295	33572	34417	36126	37216
China	6118	7080	8182	8875	9750	10293
Japan	2780	3062	3472	3704	3920	4346
India	2523	2802	3024	3120	3255	3357
Southeast Asia	2642	2964	3392	3632	3808	4118
Others	15823	16615	17592	18244	19846	20389
Total	134500	141800	150000	155200	164980	171400

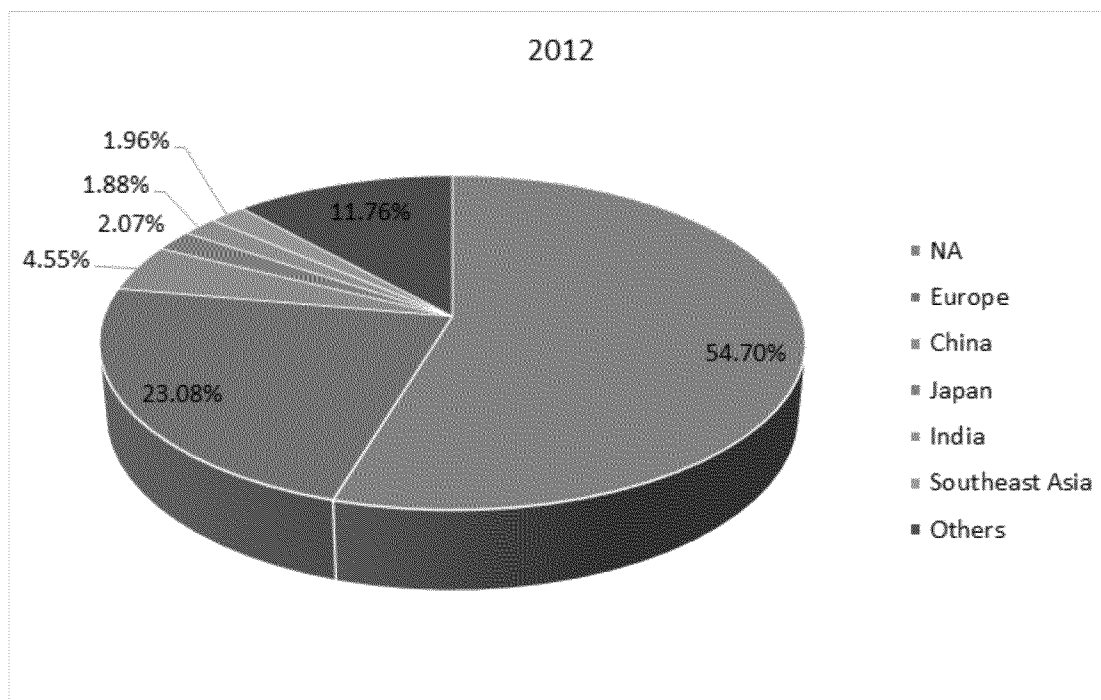
Source: QYR Chemical & Material Research Center, Feb 2017

**Table Global Paint Remover Capacity Market Share by Regions (2012-2017)**

	2012	2013	2014	2015	2016	2017
NA	54.70%	54.29%	53.84%	53.61%	53.51%	53.49%
Europe	23.08%	22.78%	22.38%	22.18%	21.90%	21.71%
China	4.55%	4.99%	5.45%	5.72%	5.91%	6.01%
Japan	2.07%	2.16%	2.31%	2.39%	2.38%	2.54%
India	1.88%	1.98%	2.02%	2.01%	1.97%	1.96%
Southeast Asia	1.96%	2.09%	2.26%	2.34%	2.31%	2.40%
Others	11.76%	11.72%	11.73%	11.75%	12.03%	11.90%

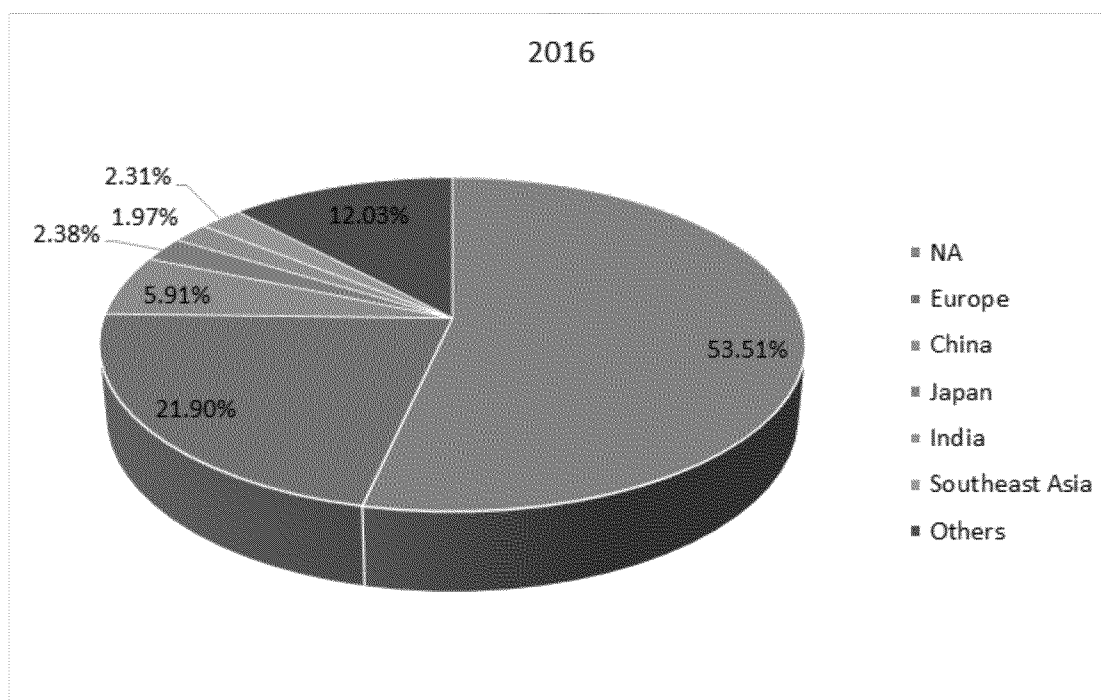
Source: QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Capacity Market Share by Regions 2012**



Source: QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Capacity Market Share by Regions 2016**



Source: QYR Chemical & Material Research Center, Feb 2017

### 3.2 Global Paint Remover Production and Market Share by Regions (2012-2017)

**Table Global Paint Remover Production by Regions (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
NA	59423	61516	64760	68011	70678	74152
Europe	25078	25808	26918	28131	28924	30101
China	4942	5658	6560	7254	7806	8325
Japan	2245	2447	2784	3027	3139	3515
India	2038	2239	2425	2550	2606	2715
Southeast Asia	2134	2369	2720	2969	3049	3331
Others	12780	13278	14106	14912	15889	16491
Total	108640	113315	120273	126854	132091	138630

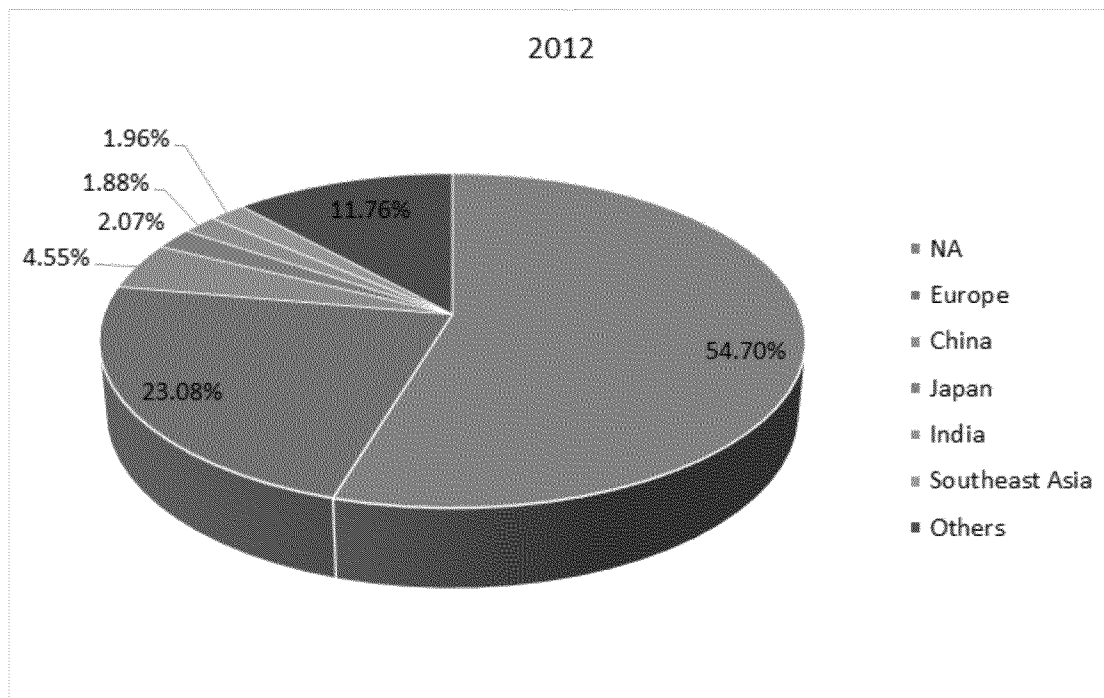
Source: QYR Chemical & Material Research Center, Feb 2017

**Table Global Paint Remover Market Share by Regions (2012-2017)**

	2012	2013	2014	2015	2016	2017
NA	54.70%	54.29%	53.84%	53.61%	53.51%	53.49%
Europe	23.08%	22.78%	22.38%	22.18%	21.90%	21.71%
China	4.55%	4.99%	5.45%	5.72%	5.91%	6.01%
Japan	2.07%	2.16%	2.31%	2.39%	2.38%	2.54%
India	1.88%	1.98%	2.02%	2.01%	1.97%	1.96%
Southeast Asia	1.96%	2.09%	2.26%	2.34%	2.31%	2.40%
Others	11.76%	11.72%	11.73%	11.75%	12.03%	11.90%

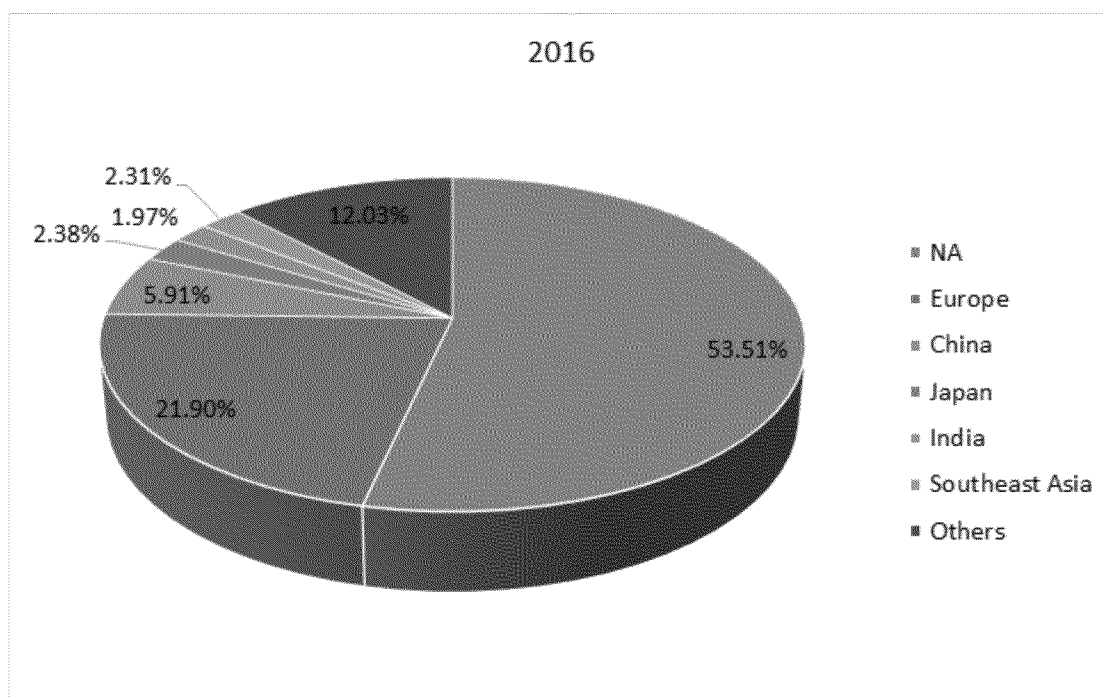
Source: QYR Chemical & Material Research Center, Feb 2017

**Figure 2012 Global Paint Remover Production Market Share by Regions**



Source: QYR Chemical & Material Research Center, Feb 2017

**Figure 2016 Global Paint Remover Production Market Share by Regions**



Source: QYR Chemical & Material Research Center, Feb 2017

### 3.3 Global Paint Remover Revenue (Value) and Market Share by Regions (2012-2017)

**Table Global Paint Remover Revenue by Regions (2012-2017) (M USD)**

	2012	2013	2014	2015	2016	2017
NA	653.06	679.54	718.43	755.79	784.16	821.41
Europe	263.61	270.43	280.77	292.58	299.30	310.51
China	18.89	21.56	24.88	27.44	29.37	31.23
Japan	19.31	20.98	23.76	25.76	26.57	29.67
India	3.89	4.27	4.60	4.82	4.90	5.09
Southeast Asia	6.12	6.77	7.74	8.42	8.60	9.37
Others	73.28	75.89	80.25	84.59	89.68	92.79
Total	1038.16	1079.44	1140.43	1199.40	1242.58	1300.07

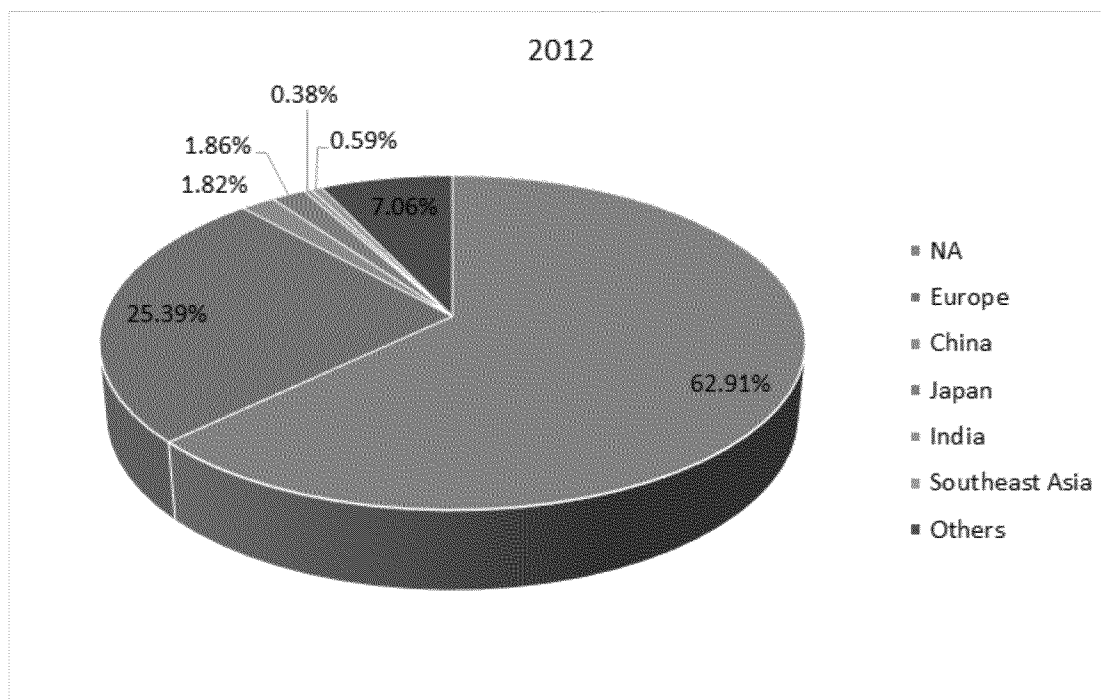
Source: QYR Chemical & Material Research Center, Feb 2017

**Table Global Paint Remover Revenue Market Share by Regions (2012-2017)**

	2012	2013	2014	2015	2016	2017
NA	62.91%	62.95%	63.00%	63.01%	63.11%	63.18%
Europe	25.39%	25.05%	24.62%	24.39%	24.09%	23.88%
China	1.82%	2.00%	2.18%	2.29%	2.36%	2.40%
Japan	1.86%	1.94%	2.08%	2.15%	2.14%	2.28%
India	0.38%	0.40%	0.40%	0.40%	0.39%	0.39%
Southeast Asia	0.59%	0.63%	0.68%	0.70%	0.69%	0.72%
Others	7.06%	7.03%	7.04%	7.05%	7.22%	7.14%

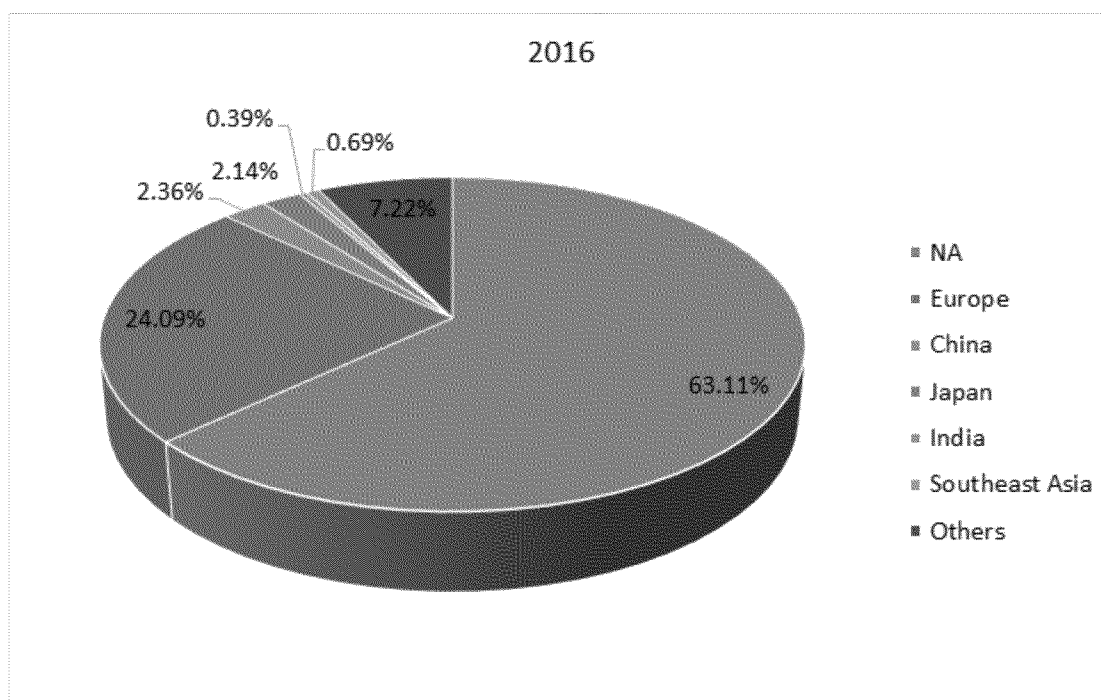
Source: QYR Chemical & Material Research Center, Feb 2017

**Figure 2012 Global Paint Remover Revenue Market Share by Regions**



Source: QYR Chemical & Material Research Center, Feb 2017

**Figure 2016 Global Paint Remover Revenue Market Share by Regions**



Source: QYR Chemical & Material Research Center, Feb 2017

### 3.4 Global Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2012-2017)

**Table Global Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2012-2017)**

	2012	2013	2014	2015	2016	2017
Capacity (MT)	134500	141800	150000	155200	164980	171400
Capacity Growth Rate		5.43%	5.78%	3.47%	6.30%	3.89%
Production (MT)	108640	113315	120273	126854	132091	138630
Production Growth Rate		4.30%	6.14%	5.47%	4.13%	4.95%
Capacity Utilization Rate	80.77%	79.91%	80.18%	81.74%	80.06%	80.88%
Price (USD/MT)	9556	9526	9482	9455	9407	9378
Revenue(M USD)	1038.2	1079.4	1140.4	1199.4	1242.6	1300.1
Revenue Growth Rate		3.98%	5.65%	5.17%	3.60%	4.63%
Cost (USD/MT)	7104	7146	7148	7240	7326	7338
Gross (USD/MT)	2452	2380	2334	2215	2081	2040
Gross Margin	25.66%	24.98%	24.62%	23.43%	22.12%	21.75%

Source: QYR Chemical & Material Research Center, Feb 2017

### 3.5 North America Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2012-2017)

**Table North America Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2012-2017)**

	2012	2013	2014	2015	2016	2017
Capacity (MT)	73566	76982	80766	83208	88275	91681
Production(MT)	59423	61516	64760	68011	70678	74152
Capacity Utilization Rate	80.78%	79.91%	80.18%	81.74%	80.07%	80.88%
Price (USD/MT)	10990	11047	11094	11113	11095	11077
Revenue(M USD)	653.06	679.54	718.43	755.79	784.16	821.41
Cost (USD/MT)	7414	7609	7735	7644	7600	7569
Gross (USD/MT)	3576	3438	3359	3469	3495	3508
Gross Margin	32.54%	31.12%	30.28%	31.22%	31.50%	31.67%

Source: QYR Chemical & Material Research Center, Feb 2017



### 3.6 Europe Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2012-2017)

**Table Europe Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2012-2017)**

	2012	2013	2014	2015	2016	2017
Capacity (MT)	31048	32295	33572	34417	36126	37216
Production(MT)	25078	25808	26918	28131	28924	30101
Capacity Utilization Rate	80.77%	79.91%	80.18%	81.74%	80.06%	80.88%
Price (USD/MT)	10512	10479	10431	10401	10348	10316
Revenue(M USD)	263.61	270.43	280.77	292.58	299.30	310.51
Cost (USD/MT)	7169	7301	7246	7101	7102	7086
Gross (USD/MT)	3343	3178	3185	3300	3246	3230
Gross Margin	31.80%	30.32%	30.53%	31.72%	31.37%	31.31%

Source: QYR Chemical & Material Research Center, Feb 2017

### 3.7 China Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2012-2017)

**Table China Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2012-2017)**

	2012	2013	2014	2015	2016	2017
Capacity (MT)	6118	7080	8182	8875	9750	10293
Production(MT)	4942	5658	6560	7254	7806	8325
Capacity Utilization Rate	80.78%	79.92%	80.18%	81.74%	80.06%	80.88%
Price (USD/MT)	3822	3811	3793	3783	3762	3751
Revenue(M USD)	18.89	21.56	24.88	27.44	29.37	31.23
Cost (USD/MT)	3042	2986	2976	2980	2972	2979
Gross (USD/MT)	780	825	817	803	790	772
Gross Margin	20.41%	21.64%	21.55%	21.22%	20.99%	20.59%

Source: QYR Chemical & Material Research Center, Feb 2017

### 3.8 Japan Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2012-2017)

**Table Japan Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2012-2017)**

	2012	2013	2014	2015	2016	2017
Capacity (MT)	2780	3062	3472	3704	3920	4346
Production(MT)	2245	2447	2784	3027	3139	3515
Capacity Utilization Rate	80.76%	79.92%	80.18%	81.72%	80.08%	80.88%
Price (USD/MT)	8601	8574	8534	8510	8464	8441
Revenue(M USD)	19.3	21.0	23.8	25.8	26.6	29.7
Cost (USD/MT)	6164	6167	6125	6133	6124	6113
Gross (USD/MT)	2437	2407	2409	2377	2340	2328
Gross Margin	28.34%	28.07%	28.23%	27.93%	27.64%	27.57%

Source: QYR Chemical & Material Research Center, Feb 2017

### 3.9 Southeast Asia Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2012-2017)

**Table Southeast Asia Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2012-2017)**

	2012	2013	2014	2015	2016	2017
Capacity (MT)	2642	2964	3392	3632	3808	4118
Production(MT)	2134	2369	2720	2969	3049	3331
Capacity Utilization Rate	80.77%	79.93%	80.19%	81.75%	80.07%	80.89%
Price (USD/MT)	2868	2858	2846	2836	2821	2813
Revenue(M USD)	6.12	6.77	7.74	8.42	8.60	9.37
Cost (USD/MT)	2441	2430	2424	2420	2412	2409
Gross (USD/MT)	427	428	422	416	409	404
Gross Margin	14.88%	14.97%	14.82%	14.67%	14.51%	14.36%

Source: QYR Chemical & Material Research Center, Feb 2017

### 3.10 India Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2012-2017)

**Table India Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2012-2017)**

	2012	2013	2014	2015	2016	2017
Capacity (MT)	2523	2802	3024	3120	3255	3357
Production(MT)	2038	2239	2425	2550	2606	2715
Capacity Utilization Rate	80.78%	79.91%	80.19%	81.73%	80.06%	80.88%
Price (USD/MT)	1909	1907	1897	1890	1880	1875
Revenue(M USD)	3.89	4.27	4.60	4.82	4.90	5.09
Cost (USD/MT)	1641	1635	1633	1623	1621	1624
Gross (USD/MT)	268	272	264	267	259	251
Gross Margin	14.06%	14.27%	13.93%	14.12%	13.79%	13.40%

Source: QYR Chemical & Material Research Center, Feb 2017

## 4 Global Paint Remover Supply (Production), Consumption, Export, Import by Regions (2012-2017)

### 4.1 Global Paint Remover Consumption by Regions (2012-2017)

**Table Global Paint Remover Consumption Market by Regions (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
NA	35105	36316	37912	39557	40963	42368
Europe	26332	27098	28264	29538	30370	31606
China	17296	18184	19450	20699	21760	23138
Japan	5614	6117	6960	7569	7846	8788
India	2561	2842	3264	3562	3659	3997
Southeast Asia	2561	2842	3264	3562	3659	3997
Others	19171	19916	21159	22367	23834	24736
Total	108640	113315	120273	126854	132091	138630

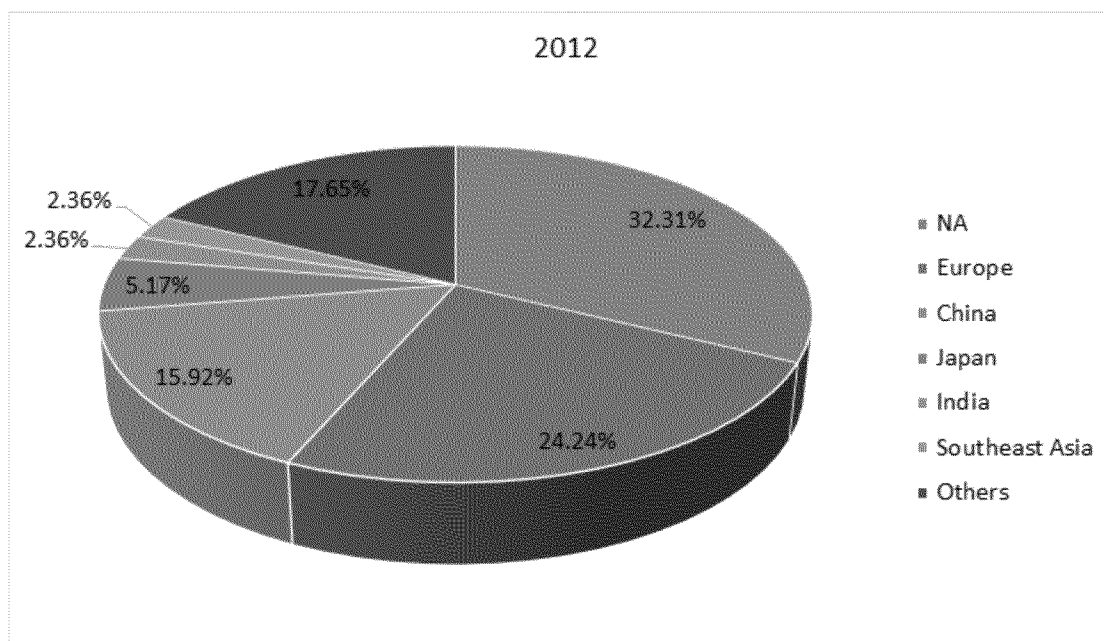
Source: QYR Chemical & Material Research Center, Feb 2017

**Table Global Paint Remover Consumption Market Share by Regions (2012-2017)**

	2012	2013	2014	2015	2016	2017
NA	32.31%	32.05%	31.52%	31.18%	31.01%	30.56%
Europe	24.24%	23.91%	23.50%	23.28%	22.99%	22.80%
China	15.92%	16.05%	16.17%	16.32%	16.47%	16.69%
Japan	5.17%	5.40%	5.79%	5.97%	5.94%	6.34%
India	2.36%	2.51%	2.71%	2.81%	2.77%	2.88%
Southeast Asia	2.36%	2.51%	2.71%	2.81%	2.77%	2.88%
Others	17.65%	17.58%	17.59%	17.63%	18.04%	17.84%

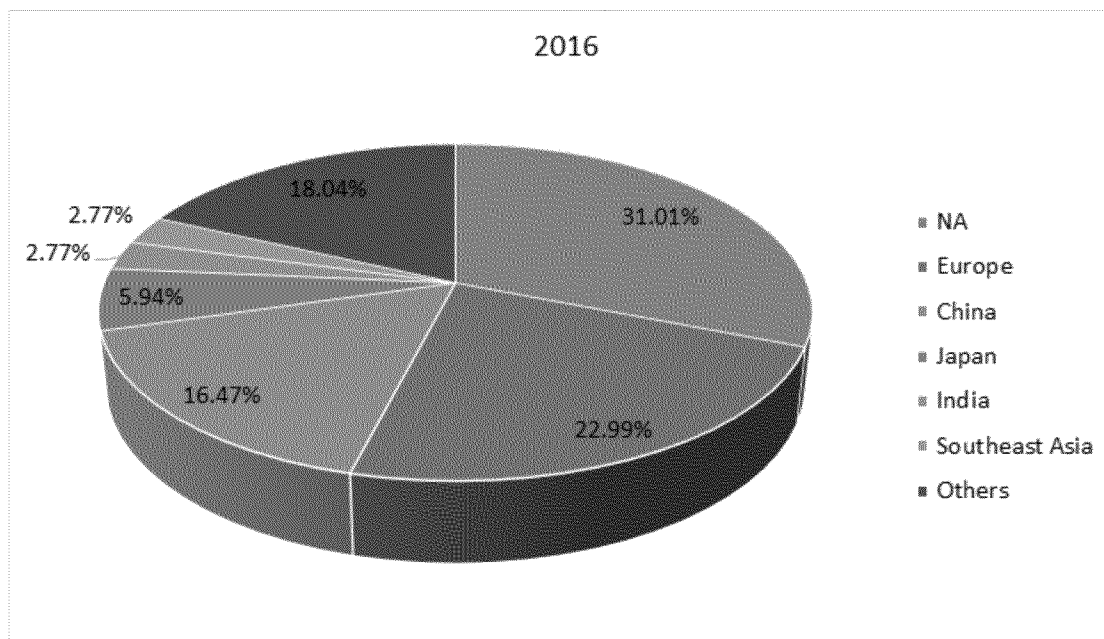
Source: QYR Chemical & Material Research Center, Feb 2017

**Figure 2012 Global Paint Remover Consumption Market Share by Regions**



Source: QYR Chemical & Material Research Center, Feb 2017

**Figure 2016 Global Paint Remover Consumption Market Share by Regions**



Source: QYR Chemical & Material Research Center, Feb 2017

## 4.2 North America Paint Remover Production, Consumption, Export, Import by Regions (2012-2017)

**Table North America Paint Remover Production, Consumption, Import & Export (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
Supply	59423	61516	64760	68011	70678	74152
Import	2100	4554	8291	9031	9096	9475
Export	26418	29754	35139	37485	38811	41259
Consumption	35105	36316	37912	39557	40963	42368

Source: QYR Chemical & Material Research Center, Feb 2017

## 4.3 Europe Paint Remover Production, Consumption, Export, Import by Regions (2012-2017)

**Table Europe Paint Remover Production, Consumption, Import & Export (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
Supply	25078	25808	26918	28131	28924	30101
Import	1785	1848	1950	2038	2097	2126
Export	531	558	604	631	651	621
Consumption	26332	27098	28264	29538	30370	31606

Source: QYR Chemical & Material Research Center, Feb 2017

## 4.4 China Paint Remover Production, Consumption, Export, Import by Regions (2012-2017)

**Table China Paint Remover Production, Consumption, Import & Export (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
Supply	4942	5658	6560	7254	7806	8325
Import	13575	13914	14387	14919	15421	16342
Export	1221	1388	1497	1474	1467	1529
Consumption	17296	18184	19450	20699	21760	23138

Source: QYR Chemical & Material Research Center, Feb 2017

## 4.5 Japan Paint Remover Production, Consumption, Export, Import by Regions (2012-2017)

**Table Japan Paint Remover Production, Consumption, Import & Export (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
Supply	2245	2447	2784	3027	3139	3515
Import	3846	4279	4932	5250	5316	5984
Export	477	609	756	708	609	711
Consumption	5614	6117	6960	7569	7846	8788

Source: QYR Chemical & Material Research Center, Feb 2017

## 4.6 Southeast Asia Paint Remover Production, Consumption, Export, Import by Regions (2012-2017)

**Table Southeast Asia Paint Remover Production, Consumption, Import & Export (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
Supply	2134	2369	2720	2969	3049	3331
Import	893	1081	1232	1217	1170	1194
Export	466	608	688	624	560	528
Consumption	2561	2842	3264	3562	3659	3997

Source: QYR Chemical & Material Research Center, Feb 2017

## 4.7 India Paint Remover Production, Consumption, Export, Import by Regions (2012-2017)

**Table India Paint Remover Production, Consumption, Import & Export (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
Supply	2038	2239	2425	2550	2606	2715
Import	953	16.5	18.3	22.1	20.2	21.8
Export	430	448	462	484	427	402
Consumption	2561	2842	3264	3562	3659	3997

Source: QYR Chemical & Material Research Center, Feb 2017

## 5 Global Paint Remover Production, Revenue (Value), Price Trend by Types

### 5.1 Global Paint Remover Production and Market Share by Types (2012-2017)

**Table Global Paint Remover Production by Types (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
The Caustic Type	15351	16158	17295	18381	19311	20586
The Acidic Type	24998	25824	27181	28364	29205	30151
The Solvent Type	68291	71333	75797	80109	83575	87893

Source: QYR Chemical & Material Research Center, Feb 2017

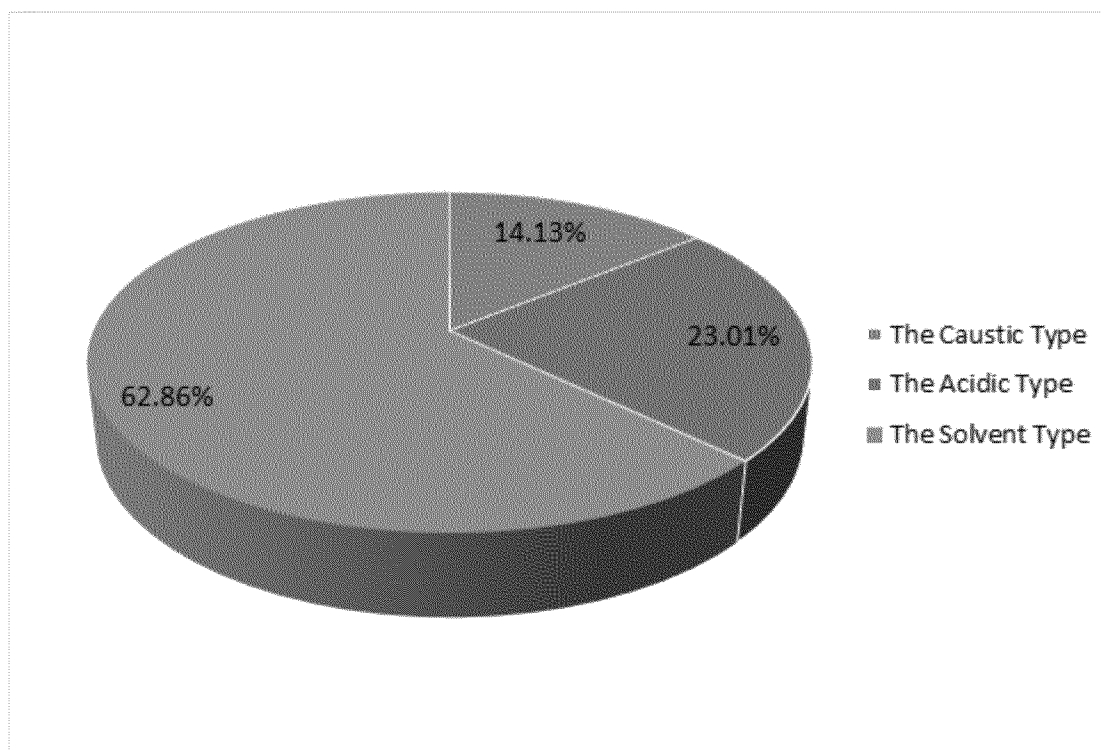
**Table Global Paint Remover Production Share by Types (2012-2017)**

	2012	2013	2014	2015	2016	2017
The Caustic Type	14.13%	14.26%	14.38%	14.49%	14.62%	14.85%
The Acidic Type	23.01%	22.79%	22.60%	22.36%	22.11%	21.75%
The Solvent Type	62.86%	62.95%	63.02%	63.15%	63.27%	63.40%

Source: QYR Chemical & Material Research Center, Feb 2017

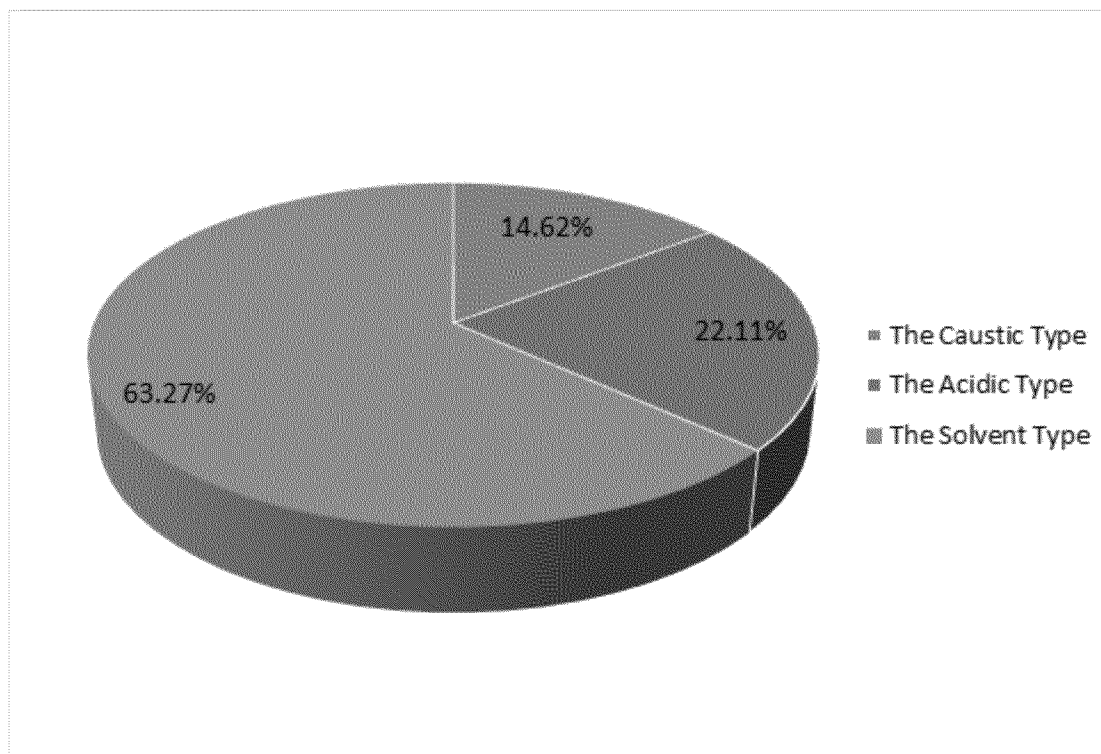


**Figure 2012 Production Market Share of Paint Remover by Types**



Source: QYR Chemical & Material Research Center, Feb 2017

**Figure 2016 Production Market Share of Paint Remover by Types**



Source: QYR Chemical & Material Research Center, Feb 2017

## 5.2 Global Paint Remover Revenue and Market Share by Types (2012-2017)

**Table Global Paint Remover Revenue by Types (2012-2017) (M USD)**

	2012	2013	2014	2015	2016	2017
The Caustic Type	148.89	156.23	166.45	176.40	184.39	195.95
The Acidic Type	246.05	253.38	265.47	276.23	282.97	291.24
The Solvent Type	643.22	669.83	708.51	746.78	775.22	812.88

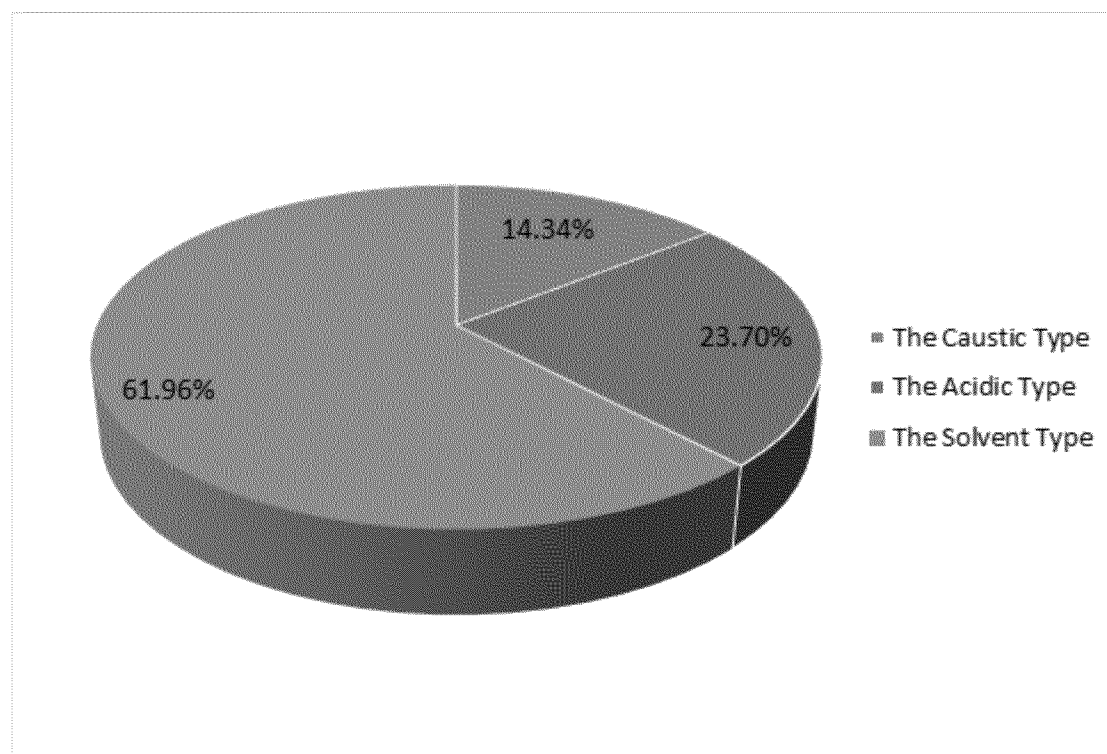
Source: QYR Chemical & Material Research Center, Feb 2017

**Table Global Paint Remover Revenue Share by Types (2012-2017)**

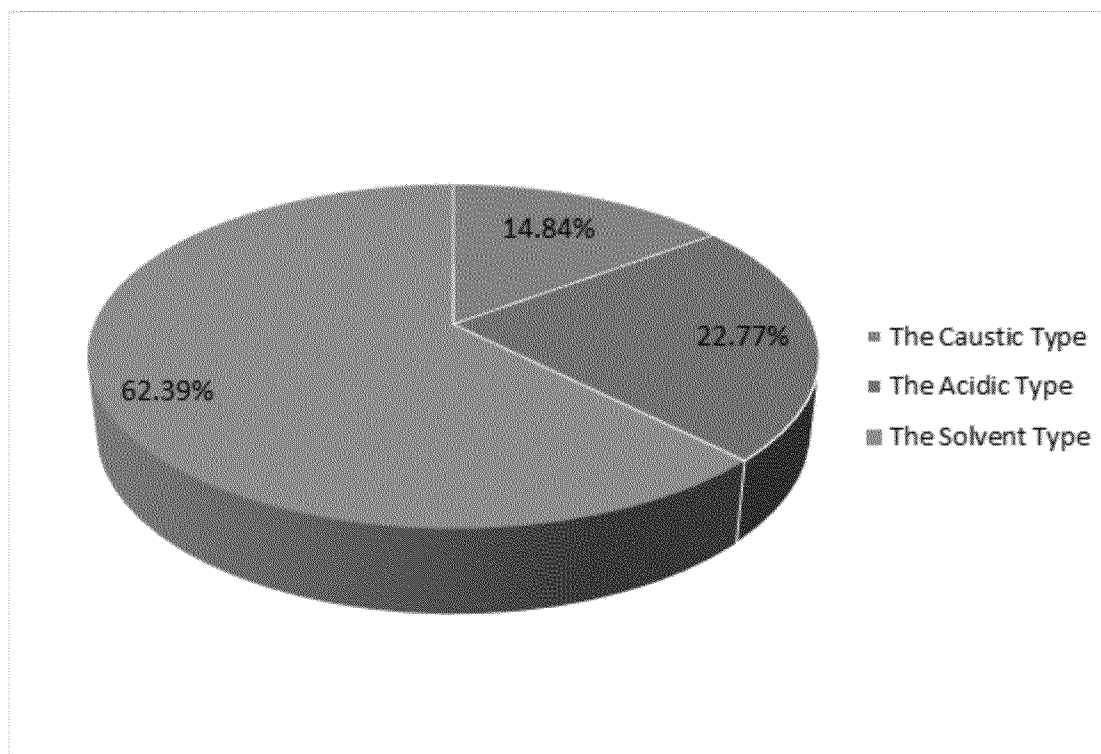
	2012	2013	2014	2015	2016	2017
The Caustic Type	14.34%	14.47%	14.60%	14.71%	14.84%	15.07%
The Acidic Type	23.70%	23.47%	23.28%	23.03%	22.77%	22.40%
The Solvent Type	61.96%	62.05%	62.13%	62.26%	62.39%	62.53%

Source: QYR Chemical & Material Research Center, Feb 2017

**Figure 2012 Revenue Market Share of Paint Remover by Types**



Source: QYR Chemical & Material Research Center, Feb 2017

**Figure 2016 Revenue Market Share of Paint Remover by Types**

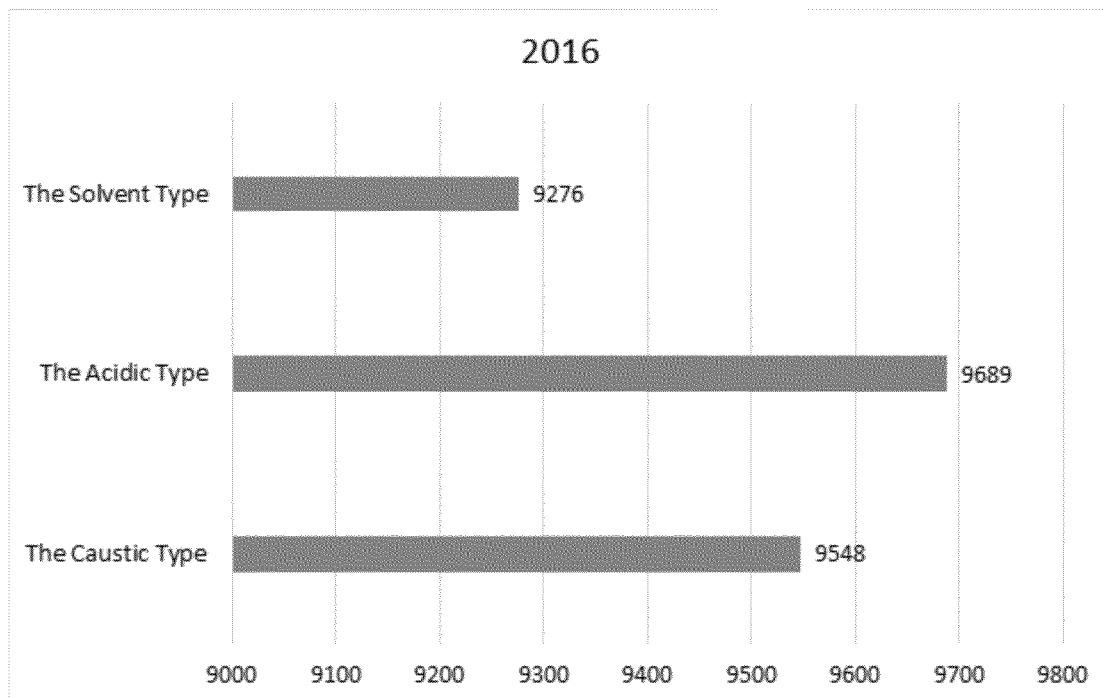
Source: QYR Chemical &amp; Material Research Center, Feb 2017

### 5.3 Global Paint Remover Price by Type (2012-2017)

**Table Global Paint Remover Price by Types (2012-2017) (USD/MT)**

	2012	2013	2014	2015	2016	2017
The Caustic Type	9699	9669	9624	9597	9548	9519
The Acidic Type	9843	9812	9767	9739	9689	9659
The Solvent Type	9419	9390	9347	9322	9276	9249
Global Average	9556	9556	9556	9556	9556	9556

Source: QYR Chemical &amp; Material Research Center, Feb 2017

**Figure Global Paint Remover Price by Types 2016 (USD/MT)**

Source: QYR Chemical &amp; Material Research Center, Feb 2017

## 5.4 Global Paint Remover Production Growth by Type (2012-2017)

**Table Global Paint Remover Production Growth by Type (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
The Caustic Type	15351	16158	17295	18381	19311	20586
Growth Rate		5.26%	7.04%	6.28%	5.06%	6.60%
The Acidic Type	24998	25824	27181	28364	29205	30151
Growth Rate		3.30%	5.25%	4.35%	2.97%	3.24%
The Solvent Type	68291	71333	75797	80109	83575	87893
Growth Rate		4.45%	6.26%	5.69%	4.33%	5.17%

Source: QYR Chemical &amp; Material Research Center, Feb 2017

## 6 Global Paint Remover Market Analysis by Applications

### 6.1 Global Paint Remover Consumption and Market Share by Applications (2012-2017)

**Table Global Paint Remover Consumption by Applications (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
Vehicle Maintenance	56495	59184	63107	66813	69862	73667
Industrial Repair	28029	29359	31258	33133	34647	36625
Building Renovation	13319	13609	14227	14892	15322	15928
Furniture Refinishing	7952	8169	8563	8981	9233	9343
Others	2846	2994	3118	3035	3027	3067

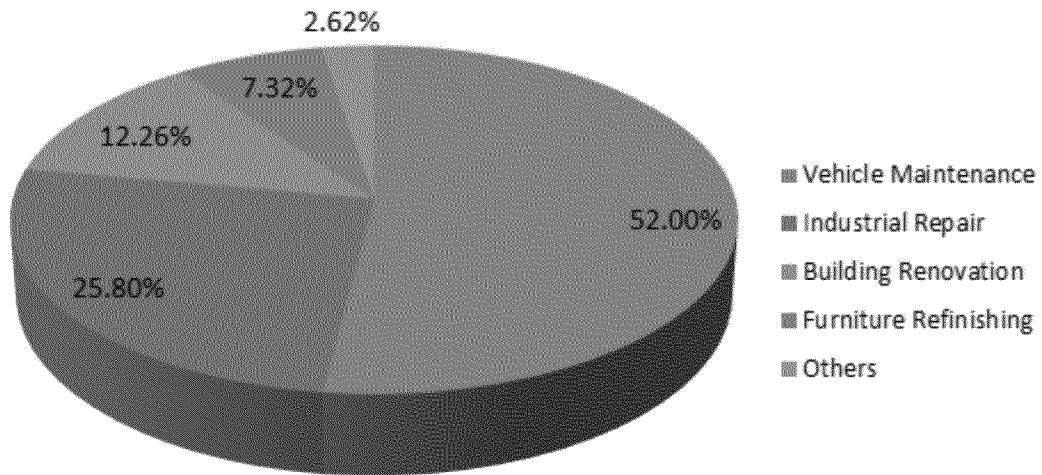
Source: QYR Chemical & Material Research Center, Feb 2017

**Table Global Paint Remover Consumption Market Share by Applications (2012-2017)**

	2012	2013	2014	2015	2016	2017
Vehicle Maintenance	52.00%	52.23%	52.47%	52.67%	52.89%	53.14%
Industrial Repair	25.80%	25.91%	25.99%	26.12%	26.23%	26.42%
Building Renovation	12.26%	12.01%	11.83%	11.74%	11.60%	11.49%
Furniture Refinishing	7.32%	7.21%	7.12%	7.08%	6.99%	6.74%
Others	2.62%	2.64%	2.59%	2.39%	2.29%	2.21%

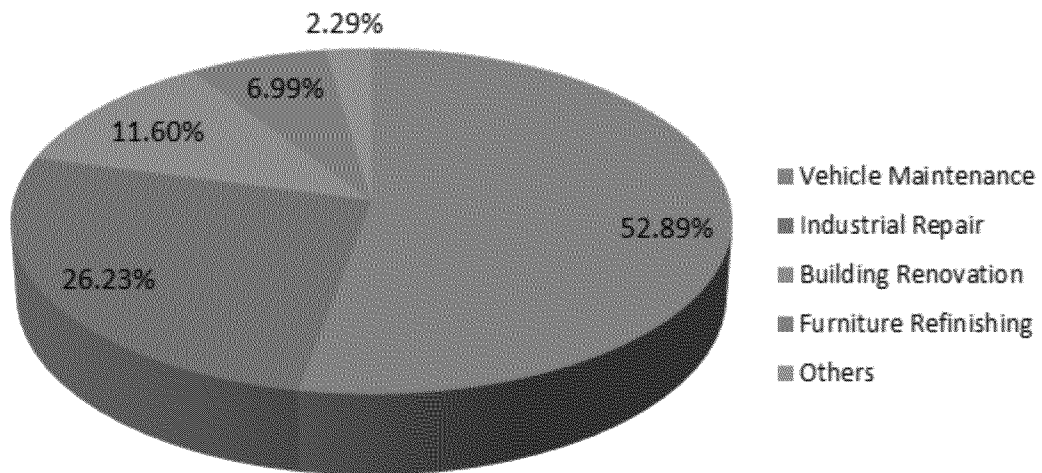
Source: QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Consumption Market Share by Applications in 2012**



Source: QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Consumption Market Share by Applications in 2016**



Source: QYR Chemical & Material Research Center, Feb 2017

## 6.2 Global Paint Remover Consumption Growth Rate by Applications (2012-2017)

**Table Global Paint Remover Consumption Growth Rate by Applications (2012-2017) (MT)**

	2012	2013	2014	2015	2016	2017
Vehicle Maintenance	56495	59184	63107	66813	69862	73667
Growth Rate		4.76%	6.63%	5.87%	4.56%	5.45%
Industrial Repair	28029	29359	31258	33133	34647	36625
Growth Rate		4.75%	6.47%	6.00%	4.57%	5.71%
Building Renovation	13319	13609	14227	14892	15322	15928
Growth Rate		2.18%	4.54%	4.67%	2.89%	3.96%
Furniture Refinishing	7952	8169	8563	8981	9233	9343
Growth Rate		2.73%	4.82%	4.88%	2.81%	1.19%
Others	2846	2994	3118	3035	3027	3067
Growth Rate		5.20%	4.14%	-2.66%	-0.26%	1.32%

Source: QYR Chemical & Material Research Center, Feb 2017

**Table Global Paint Remover Price by Applications (2012-2017) (USD/MT)**

	2012	2013	2014	2015	2016	2017
Vehicle Maintenance	10201	10170	10124	10098	10050	10028
Industrial Repair	8027	8002	7965	7942	7902	7877
Building Renovation	9078	9050	9008	8983	8937	8909
Furniture Refinishing	10988	10955	10905	10873	10818	10785
Others	10035	10003	9955	9928	9878	9847
Global Average	9556	9526	9482	9455	9407	9378

Source: QYR Chemical & Material Research Center, Feb 2017

## 6.3 Market Drivers and Opportunities

### 6.3.1 Potential Applications

The report stated that while there is a significant variety of formulations that may be used as alternatives to Methylene Chloride-based paint strippers, all of the alternatives may not be suitable for every application. In addition, each of the alternatives may have its own hazard traits or pose unique risks. Therefore, the suitability and safety of each potential alternative would need to be evaluated for each intended application.

### 6.3.2 Opportunities

Industry market potential is tremendous.

Broadening downstream applications.

Increasing downstream demand.

There is a high profit margins.

The application of new fields.



## 7 Global Paint Remover Manufacturers Profiles/Analysis

### 7.1 WM Barr



#### 7.1.1 Company Basic Information


**Table WM Barr Basic Information**

Item	Contents
Name	WM Barr
Website	<a href="http://www.wmbarr.com/">http://www.wmbarr.com/</a>
Plant Location	US
Company Profile	We come to work every day to take care of people, whether that's by helping our customers take moisture out of the air, make paint stick or take care of their homes. Our products help businesses grow, professionals get the job done, and homeowners refurbish. And we've been doing it for over 60 years.
Key Products	Citristrip Safer Paint and Varnish Stripper Aerosol , CitriStrip Stripping Gel, Klean Strip Green Safer Paint & Varnish Remover, Marine-strength paint removers , etc.
Key Sales Regions	US, EU, etc.
Raw Materials or Equipment Source	Raw material is mainly outsourced. Equipment is out-sourced.
Technology Source	Self- developed
Business History	1946 William M. Barr founds company with the market's first non-flammable paint remover.

Source: WM Barr; QYR Chemical & Material Research Center, Feb 2017

## 7.1.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
Citristrip® Gel 	<p>A powerful, industrial -strength remover. Citristrip® Gel stays wet and active for up to 24 hours, allowing you to strip multiple layers in one step. It contains no methylene chloride, is non-caustic and ideal for indoor use. This special orange stripper has a pleasant citrus scent and is biodegradable. Use Citristrip®'s all-purpose stripping gel to remove multiple layers of latex and oil -based paint, varnish, lacquer, enamel, polyurethane, shellac, acrylics and epoxy from wood, metal and masonry surfaces.</p>

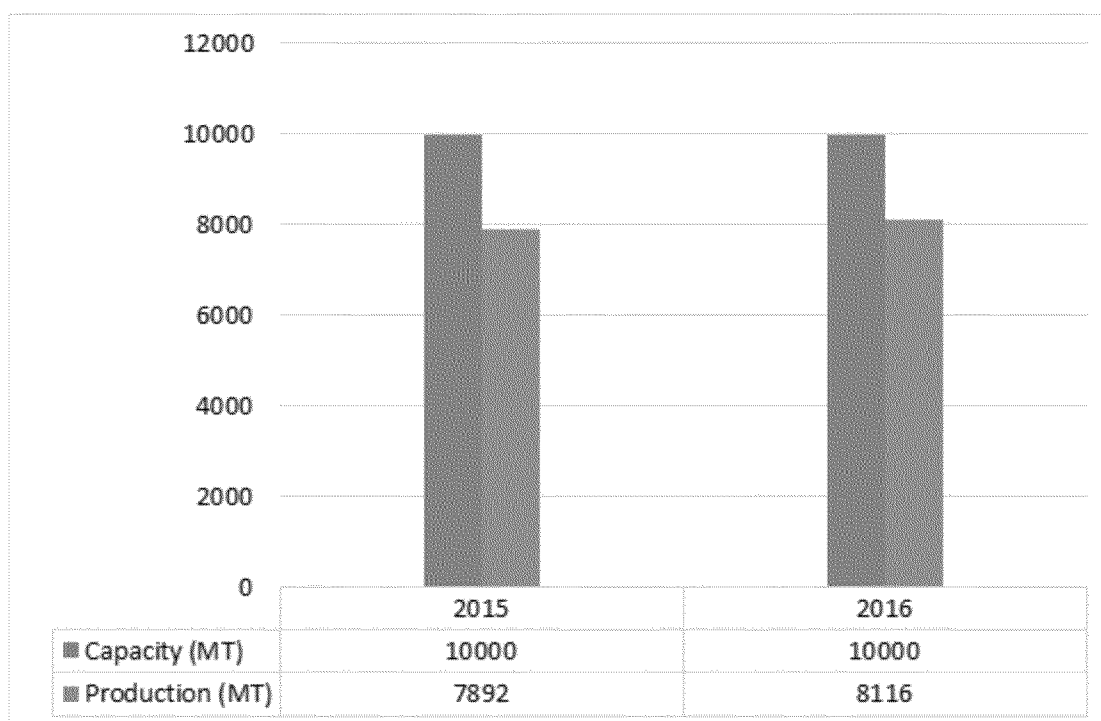
Source: WM Barr; QYR Chemical & Material Research Center, Feb 2017

## 7.1.3 WM Barr Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

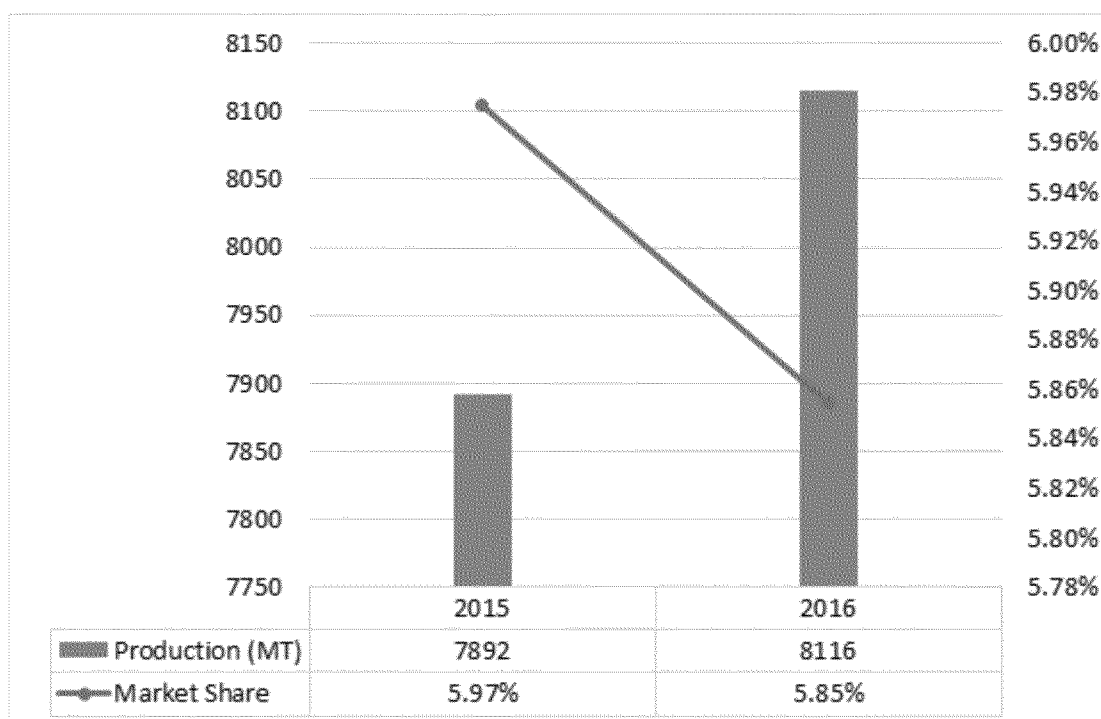
**Table WM Barr Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity (MT)	10000	10000
Production (MT)	7892	8116
Capacity Utilization Rate	78.92%	81.16%
Price (USD/MT)	17720	17605
Revenue (M USD)	139.85	142.88
Cost (USD/MT)	12581	12579
Gross (USD/MT)	5139	5026
Gross Margin	29.00%	28.55%

Source: WM Barr; QYR Chemical & Material Research Center, Feb 2017

**Figure WM Barr Paint Remover Production and Capacity (2015 and 2016)**

Source: WM Barr; QYR Chemical & Material Research Center, Feb 2017

**Figure WM Barr Paint Remover Production and Market Share (2015 and 2016)**

Source: WM Barr; QYR Chemical & Material Research Center, Feb 2017

## 7.1.4 Contact Information

W.M. Barr  
P.O. Box 1879  
Memphis, TN 38101  
1-800-238-2672

## 7.2 Savogran



### 7.2.1 Company Basic Information

**Table Savogran Basic Information**


Item	Contents
Name	Savogran
Website	<a href="http://www.savogran.com/">http://www.savogran.com/</a>
Plant Location	US
Company Profile	<p>In 1875, Charles F. Stodder founded the India Alkali Works on Boston's historic India Wharf. The company manufactured a granulated soap called "Savogran" which was sold in bulk to hotels, railroads, textile mills and public institutions. Clem Stodder, Charles' son, saw potential for "Savogran" as a consumer product and began creating smaller packages for retail sale. It was soon discovered that consumers could easily remember the popular "Savogran" name but not the identity of the company which manufactured it. So, in 1926 the India Alkali Works became the Savogran Company. Today: Savogran is an employee owned company, focused on retail and industrial cleaning and paint preparation products. Products include removers, packaged solvents, cleaners, and patching materials branded under the Savogran and SCL Sterling labels. Savogran also contract blends and packages products for a variety of industries. The employee-owners of Savogran are committed to developing and producing consistently high quality products.</p> <p>The Savogran Company purchased Sterling -Clark-Lurton in 2004 to capitalize on the synergies of these two historic companies. SCL was incorporated in 1922 as the Plymouth Rock Paint Company. In 1924, the name was changed to the Sterling Paint &amp; Varnish Company. The product line consisted of a full line of exterior, interior and marine paints, as well as</p>

	<p>putty for wood and steel sash windows. Over time the product line expanded to include artist oil colors, caulking and glazing compounds and paint removers.</p> <p>In the 1950's, with paint sundry products outselling paint, the company name was changed to Sterling Quality Products to reflect the success of their trade name "Sterling Quality." In 1961, Sterling bought out the Clark Lurton Corporation. Both companies sold solvents and served the same customer base. SCL serves the paint and hardware trade, glass industry, marine trade and automotive aftermarket.</p>
Key Products	Original Semi-paste Strypeeze®, Liquid Kutzit®, Heavy Duty SuperStrip®, Biodegradable Strypeeze®, etc.
Sales Regions	US, EU, etc.
Business History	Since 1930s. Over time the product line expanded to include artist oil colors, caulking and glazing compounds and paint removers.

Source: Savogran; QYR Chemical & Material Research Center, Feb 2017

## 7.2.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
<p>Strypeeze®</p> 	<p>America's No. 1 selling remover comes in a semi paste formula that improves cling, making it ideal for vertical or rounded surfaces. Powerful cutting action penetrates deeper, stripping several layers at a time without damaging wood or metal.</p> <p>Recommended for latex and oil -based paints, varnish and lacquers. Surfaces can be cleaned using a scraper and/or water wash -off method. Strypeeze® is recommended for outdoor use.</p> <p>Extremely Flammable.</p>

Source: Savogran; QYR Chemical & Material Research Center, Feb 2017

## 7.2.3 Savogran Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

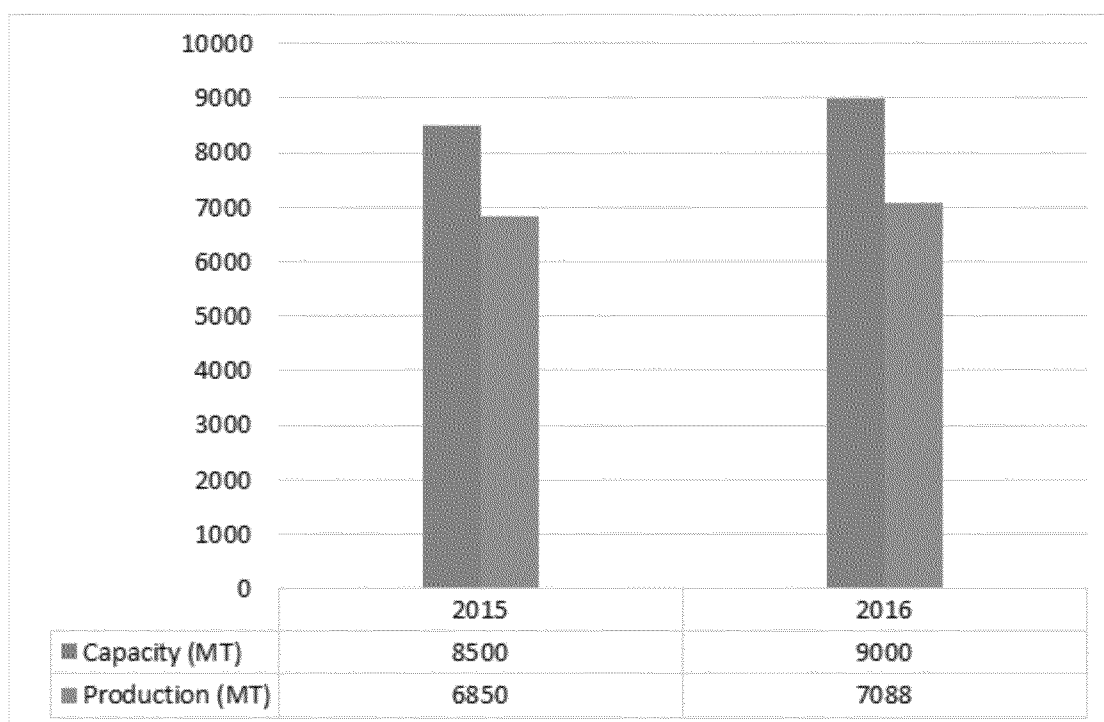
**Table Savogran Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity (MT)	8500	9000
Production (MT)	6850	7088

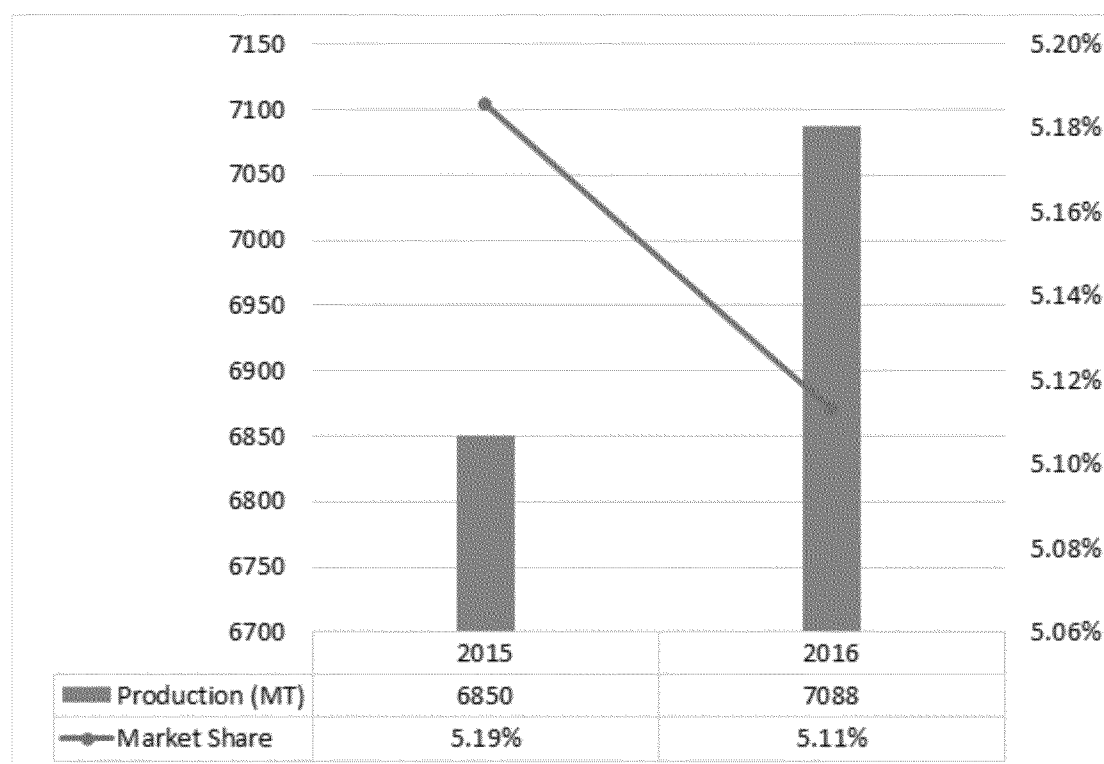
Capacity Utilization Rate	80.59%	78.76%
Price (USD/MT)	6012	5950
Revenue (M USD)	41.18	42.17
Cost (USD/MT)	4534	4504
Gross (USD/MT)	1478	1446
Gross Margin	24.58%	24.30%

Source: Savogran; QYR Chemical & Material Research Center, Feb 2017

**Figure Savogran Paint Remover Capacity and Production (2015 and 2016)**



Source: Savogran; QYR Chemical & Material Research Center, Feb 2017

**Figure Savogran Paint Remover Production and Market Share (2015 and 2016)**

Source: Savogran; QYR Chemical & Material Research Center, Feb 2017

## 7.2.4 Contact Information

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Fax: 781-762-1095

[www.savogran.com](http://www.savogran.com) [www.sclsterling.com](http://www.sclsterling.com)

Email: [info@savogran.com](mailto:info@savogran.com)

## 7.3 Dumond Chemicals



### 7.3.1 Company Basic Information

**Table Dumond Chemicals Basic Information**

Item	Contents
Name	Dumond Chemicals

Website	<a href="https://www.dumondchemicals.com/">https://www.dumondchemicals.com/</a>
Plant Location	US
Company Profile	<p>Dumond® Chemicals, Inc. provides innovative and environmentally safe solutions in the areas of Paint Removal, Graffiti Control Systems, Stone and Masonry Care, Lead Abatement and Lead Encapsulating Products. Dumond® Chemicals and our easy -to-use and differentiating products offer a complete solution for the DIY, Professional, Marine and Industrial Consumer.</p> <p>The Dumond® Chemicals story began in 1981 when we revolutionized the international paint and coatings removal industry on the principles of providing environmentally responsible solutions and quality products to safely remove unwanted coatings from an array of surfaces in a user - friendly, cost effective manner under the Peel Away® brand. Peel Away® technologies are specifically developed to replace unsafe harsh chemicals and unacceptable mechanical removal methods still common in the industry today. The introduction of Peel Away® 1 Heavy Duty Paint Remover was the industry's "First" safe paint removal system and an effective alternative to open flames, heat guns, sanding and traditional blasting methods while minimizing or eliminating containment procedures. After 32 years, of Peel Away® 1 Heavy Duty Paint Remover remains the leading product used to perform historic restoration and lead abatement.</p> <p>Dumond® Chemicals, seeing a need for other commercial and industrial paint and coatings removal products and driven by the eagerness of contractors for alternatives to complex, costly and time -consuming removal methods addressing a vast range of high performance coatings and surface combinations, subsequent Peel Away® formulas were developed to provide efficient solutions to daunting jobsite challenges.</p>
Key Products	Paint removers, Cleaning solutions, Graffiti products, Other Products for Homeowners
Key Sales Regions	US, EU, etc.
Business History	The Dumond® Chemicals story began in 1981 when we revolutionized the international paint and coatings removal industry

Source: Dumond Chemicals; QYR Chemical & Material Research Center, Feb 2017

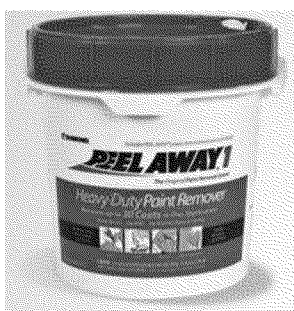
## 7.3.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
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## Peel Away® 1



Peel Away® 1 Heavy Duty Removal Kit is an environmentally responsible method for removing organic or lead based paint from most substrates. The Peel Away® 1 Heavy Duty Removal Kit includes paste remover, application tool, pH test kit, Dumond® Laminated Paper, and Citri-Lize™ neutralizer.

Source: Dumond Chemicals; QYR Chemical & Material Research Center, Feb 2017

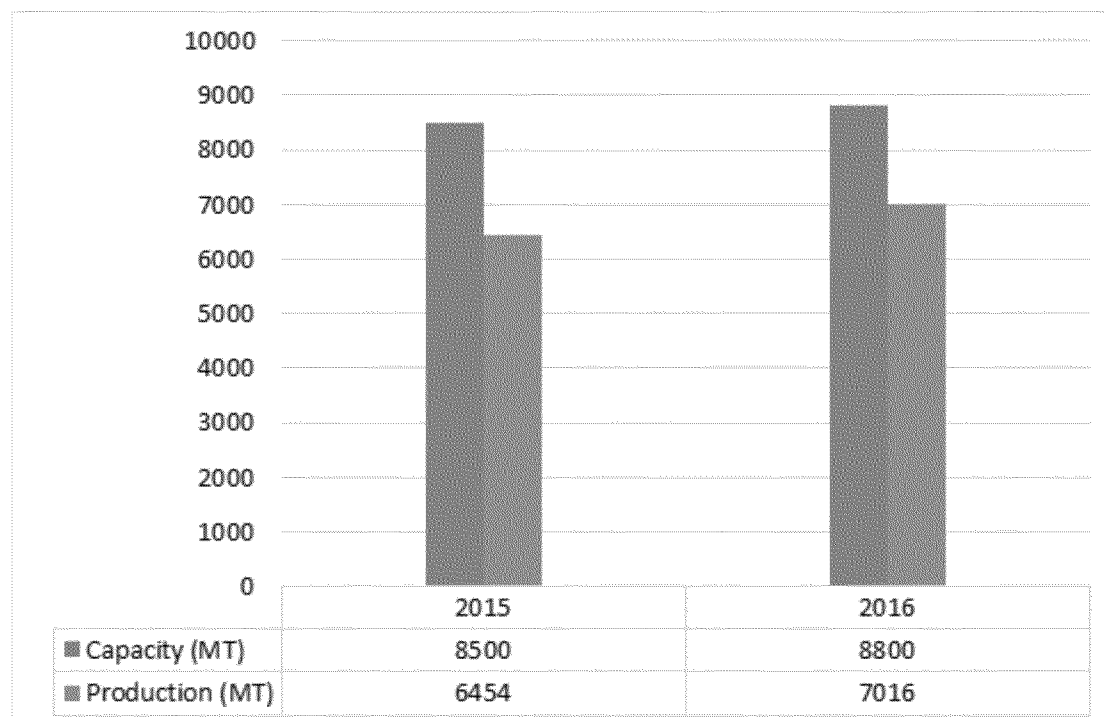
### 7.3.3 Dumond Chemicals Paint Remover Capacity, Production, Revenue, Price and Gross Margin(2015 and 2016)

**Table Dumond Chemicals Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity (MT)	8500	8800
Production (MT)	6454	7016
Capacity Utilization Rate	75.93%	79.73%
Price (USD/MT)	15600	15554
Revenue (M USD)	100.68	109.13
Cost (USD/MT)	11319	11526
Gross (USD/MT)	4281	4028
Gross Margin	27.44%	25.90%

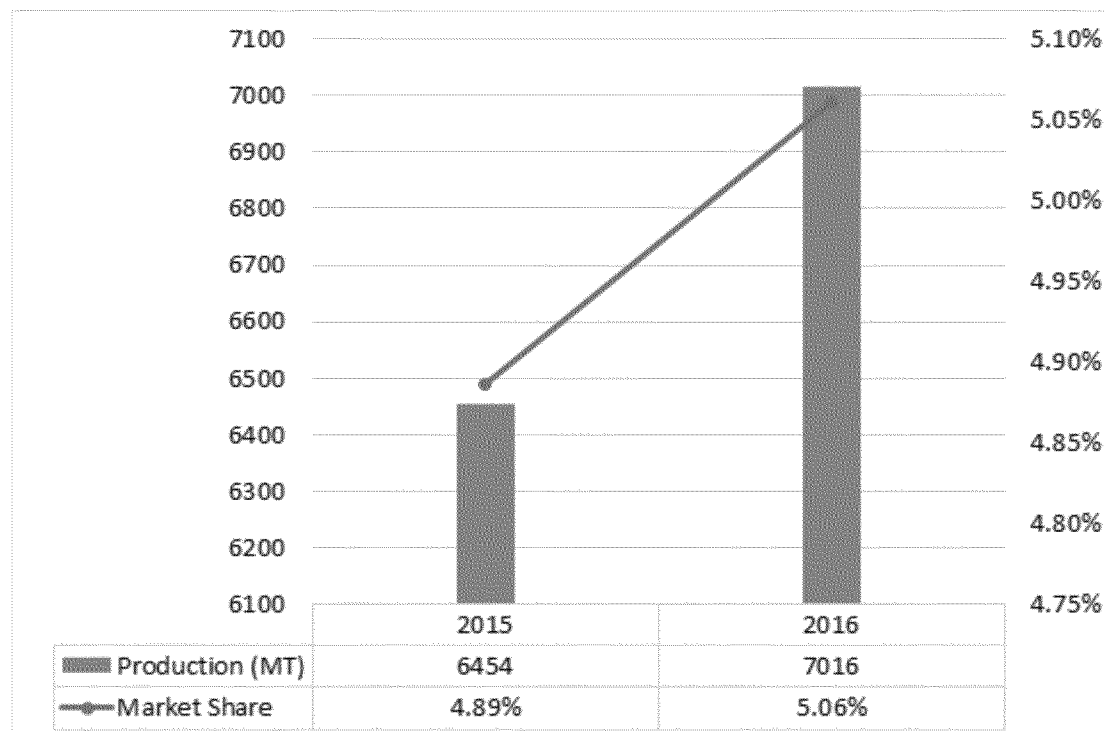
Source: Dumond Chemicals; QYR Chemical & Material Research Center, Feb 2017

**Figure Dumond Chemicals Paint Remover Production and Capacity (2015 and 2016)**



Source: Dumond Chemicals; QYR Chemical & Material Research Center, Feb 2017

**Figure Dumond Chemicals Paint Remover Production and Market Share (2015 and 2016)**

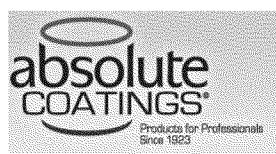


Source: Dumond Chemicals; QYR Chemical & Material Research Center, Feb 2017

### 7.3.4 Contact Information

83 General Warren Blvd.  
Suite 190  
Malvern, PA 19355  
Phone: (609) 655-7700, or toll free (800) 245-1191  
Fax: (609) 655-7725  
Email: [info@dumondglobal.com](mailto:info@dumondglobal.com)

## 7.4 Absolute Coatings



### 7.4.1 Company Basic Information

**Table Absolute Coatings Basic Information**

Item	Contents
Name	Absolute Coatings
Website	<a href="http://absolutecoatings.com/">http://absolutecoatings.com/</a>
Plant Location	US
Company Profile	<p>While Absolute Coatings has been around for nearly a century, we like to think of ourselves as 90 years young. That's because we've always been an innovative and forward looking company with a mission to create high value, cutting edge products.</p> <p>Our well -known and long standing brands are sought after by professionals and experienced do it yourselfers. Last•n•Last® and Absco® wood finish products, PolyCare® hardwood floor cleaners, Zip guard® finishes, and POR 15® rust preventive and restoration coatings each set the standard in their categories.</p> <p>How do we do it? In a world where name brands are owned by anonymous corporate entities, Absolute Coatings is a family owned and professionally managed organization headquartered in New Rochelle, New York. We research, develop, and manufacture all products in our onsite, state of the art facility. Our hands on approach and entrepreneuria spirit enable Absolute Coatings to act nimbly in the pursuit of new ideas. Absolute Coatings was one of the first companies in the U.S. to introduce polyurethane finishes and we continue to launch products to meet the needs of our customers. For example, we address today's growing</p>

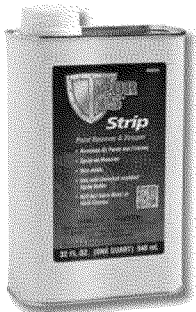
concerns about indoor air quality and protecting the environment with Last•n•Last products that perform brilliantly while offering lower VOC levels, low odor, easy soap and water clean -up, and we consistently invest in enhancing our technology, facilities, and equipment in order to pursue the research and development of new and improved products.

Key Products	ZipStrip Premium Green Paint & Finish Remover
Key Sales Regions	US, EU, etc.
Business History	Since 1923.

Source: Absolute Coatings; QYR Chemical & Material Research Center, Feb 2017

## 7.4.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
POR-15@ Strip 	POR-15@ Strip is a clear spray -on remover, with the consistency of water. In sample testing, our POR-15@ Strip was the choice of professional auto strippers. Remove any coating from any surface without damaging window, glass, chrome, or waterstrip. POR-15@ Strip is non-acidic and will not harm aluminum or factory fiberglass. This product contains methylene chloride.

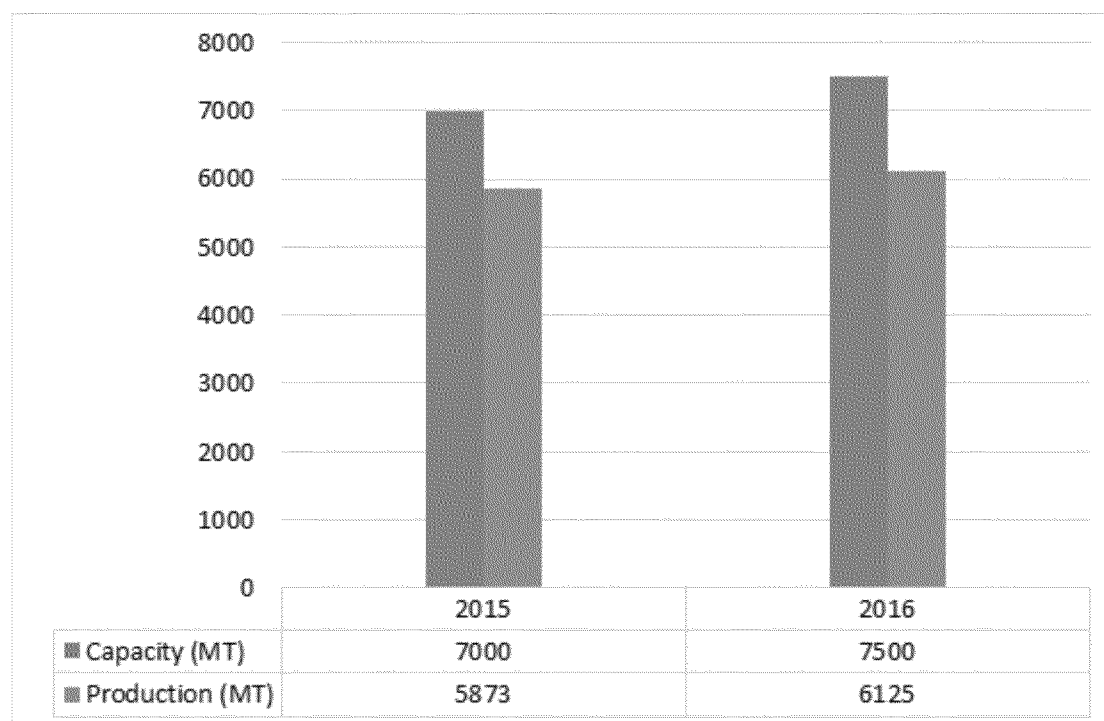
Source: Absolute Coatings; QYR Chemical & Material Research Center, Feb 2017

## 7.4.3 Absolute Coatings Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

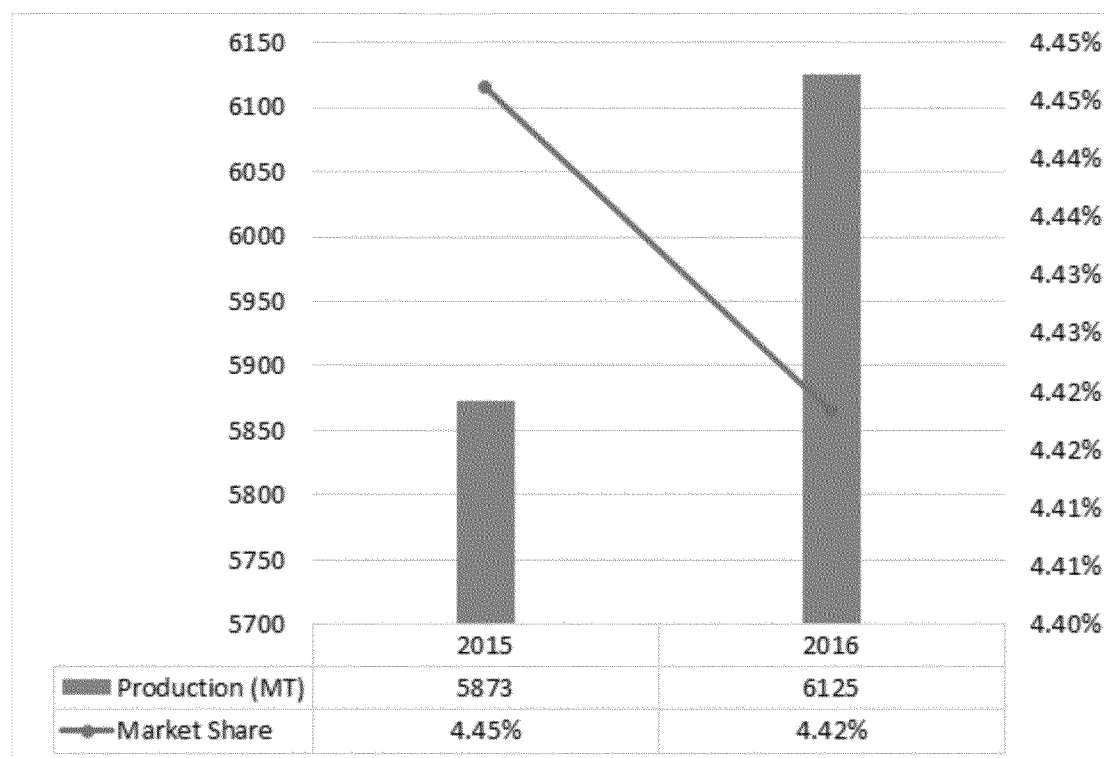
**Table Absolute Coatings Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity (MT)	7000	7500
Production (MT)	5873	6125
Capacity Utilization Rate	83.90%	81.67%
Price (USD/MT)	5814	5795
Revenue (M USD)	34.15	35.49
Cost (USD/MT)	4492	4566
Gross (USD/MT)	1322	1229
Gross Margin	22.73%	21.20%

Source: Absolute Coatings; QYR Chemical & Material Research Center, Feb 2017

**Figure Absolute Coatings Paint Remover Production and Capacity (2015 and 2016)**

Source: Absolute Coatings; QYR Chemical & Material Research Center, Feb 2017

**Figure Absolute Coatings Paint Remover Production and Market Share (2015 and 2016)**

Source: Absolute Coatings; QYR Chemical & Material Research Center, Feb 2017

## 7.4.4 Contact Information

Absolute Coatings, Inc.  
 38 Portman Road  
 New Rochelle, NY 10801  
 914-636-0700  
 Fax 914-636-0822  
 General Product Information:  
 Info@AbsoluteCoatings.com

## 7.5 Fiberlock Technologies



### 7.5.1 Company Basic Information

**Table Fiberlock Technologies Basic Information**

Item	Contents
Name	Fiberlock Technologies
Website	<a href="http://www.fiberlock.com/">http://www.fiberlock.com/</a>
Plant Location	US
Company Profile	<p>For over 30 years, Fiberlock Technologies, Inc has been the leading manufacturer of products used to address environmental, safety and health hazards. Founded on the core beliefs that superior quality, definitive science and enduring service are the keys to corporate success, Fiberlock has grown to become one of the most respected names in the abatement and remediation industry.</p> <p>In 1978, Fiberlock launched its flagship product ABC® Asbestos Binding Compound, the most successful asbestos encapsulation solution on the market. This was followed by LBC® Lead Barrier Compound, which is accepted for use in all 50 states as a permanent lead abatement method.</p> <p>In 1984, Fiberlock developed the first mobile containment system which was originally used for asbestos abatement. Since then the Kontrol Kube has evolved to become the leading product in bio-containment, dust and particulate control and patient isolation in health care facilities. Today, the Kontrol Kube can be found in thousands of hospitals and facilities worldwide.</p> <p>In 2001, Fiberlock introduced its IAQ™ line of mold remediation products</p>

including ShockWave®—the most versatile disinfectant/sanitizer & cleaner on the market with over 140 organism kill claims and AfterShock® Fungicidal Coating – the first coating EPA registered to kill mold.

In 2008, Fiberlock launched Five Shades of Green™ and the Green Focus™ Certification program to reinforce its position as an industry leader in green practices and products. Fiberlock has defined a new standard for green that covers a broad spectrum of environmental issues by developing products that are safer for the environment and individuals, employing better manufacturing methods, and by taking an active role in promoting these activities.


Fiberlock has supplied environmental control products to customers such as the Pentagon, Disney World, IBM, Mobile, Amtrak, DuPont, The National Gallery of Art, Harvard University, NASA, General Electric, AT&T, General Motors, thousands of private homes, and hundreds of military facilities throughout the world.

Key Products	Piranha Paint Strippers
Sales Regions	USA, EU, etc.
Business History	Since 1978.

Source: Fiberlock Technologies, QYR Chemical & Material Research Center, Feb 2017

## 7.5.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
Piranha 2 	Color: Clear / Hazy Odor: Pungent Odor Flash Point: > 212 ° F Shelf Life: 36 Months Min. Weight Per Gallon: 9.6 lbs/gal Non-Porous Surfaces: 100 ft2/Gal Porous Surfaces: 50-100 ft2/Gal

Source: Fiberlock Technologies, QYR Chemical & Material Research Center, Feb 2017

## 7.5.3 Fiberlock Technologies Paint Remover Capacity, Production, Revenue, Price and Gross Margin(2015 and 2016)

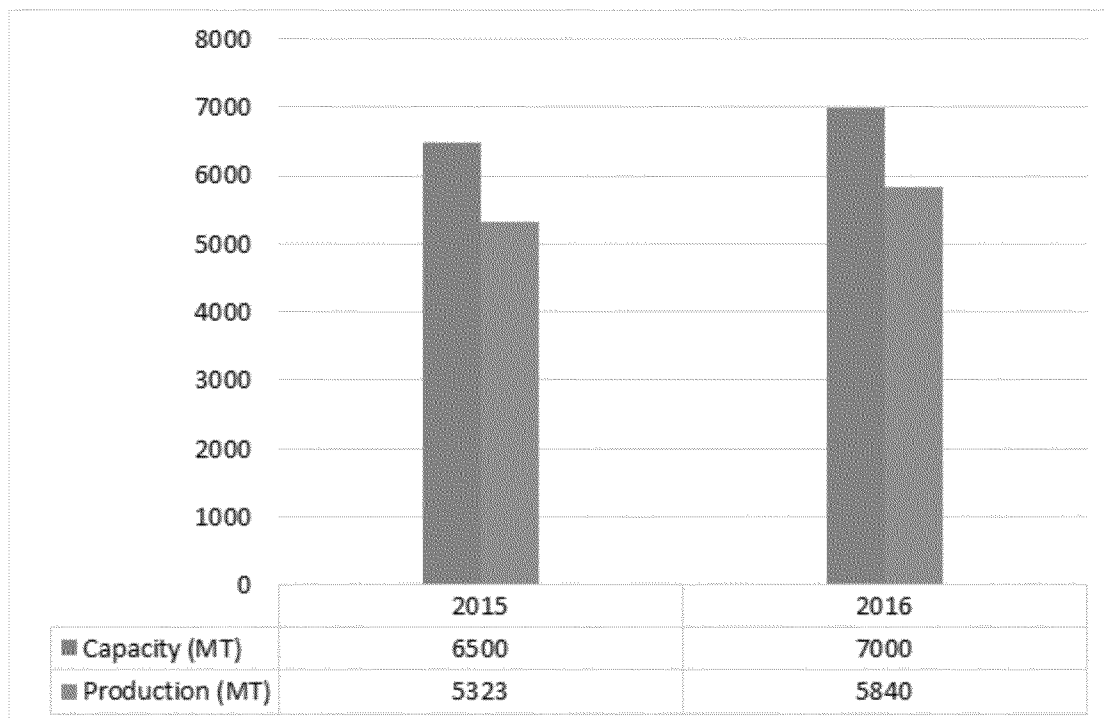
**Table Fiberlock Technologies Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity (MT)	6500	7000

Production (MT)	5323	5840
Capacity Utilization Rate	81.89%	83.43%
Price (USD/MT)	12104	12086
Revenue (M USD)	64.43	70.58
Cost (USD/MT)	8637	8838
Gross (USD/MT)	3467	3248
Gross Margin	28.64%	26.87%

Source: Fiberlock Technologies, QYR Chemical & Material Research Center, Feb 2017

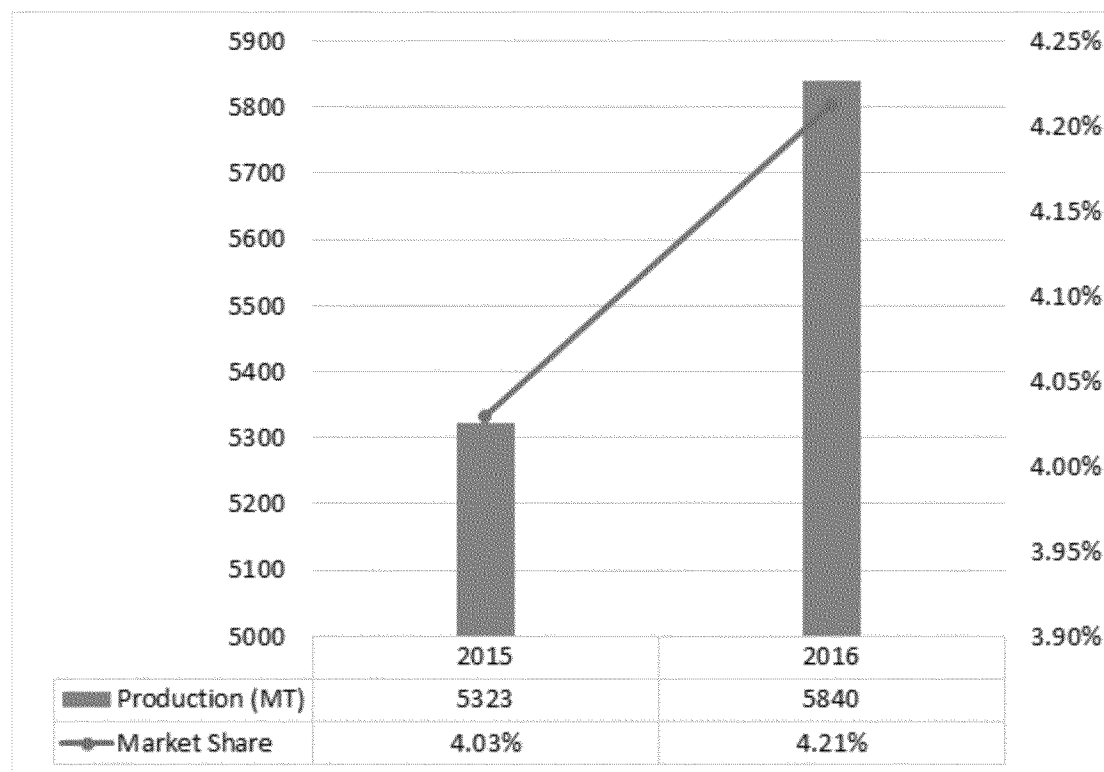
**Figure Fiberlock Technologies Paint Remover Production and Capacity (2015 and 2016)**



Source: Fiberlock Technologies, QYR Chemical & Material Research Center, Feb 2017



**Figure Fiberlock Technologies Paint Remover Production and Market Share (2015 and 2016)**



Source: Fiberlock Technologies, QYR Chemical & Material Research Center, Feb 2017

## 7.5.4 Contact Information

150 Dascomb Road  
 Andover, MA 01810  
 Tel: 800-342-3755 978-623-9987  
 Fax: 978-475-6205  
 Email: [info@fiberlock.com](mailto:info@fiberlock.com)

## 7.6 Sunnyside

sunnyside

### 7.6.1 Company Basic Information

**Table Sunnyside Basic Information**



Item	Contents
------	----------

Name	Sunnyside
Website	<a href="http://www.sunnysidecorp.com/">http://www.sunnysidecorp.com/</a>
Plant Location	US
Company Profile	<p>Quality in every phase of Sunnyside operations has been the hallmark of the company since 1893.</p> <p>Founder Henry Lueders emphasized such a high standard early in the company's history. Throughout the 100+ years of Sunnyside operations this quality philosophy and attitude have been foremost and constant.</p> <p>Sunnyside products and service have attained a reputation for credibility that has grown over the years. This century of first hand consumer and industrial experience has resulted in nationwide "word-of-mouth" confidence in the "products that work."</p>
Key Products	Gloss Remover, Tile Adhesive Remover, Pro Solutions Premium Paint & Varnish Remover, Marine Remover
Key Sales Regions	US, EU, etc.
Business History	Since 1893

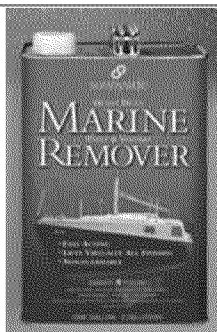
Source: Sunnyside; QYR Chemical & Material Research Center, Feb 2017

## 7.6.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

	Figure	Description
Gloss Remover		Performs like "liquid sandpaper", cleans and prepares glossy surfaces prior to painting.
Tile Adhesive Remover		Non-flammable semi-paste formulation used to soften old, hardened adhesives.

## Marine Remover



Fast acting, semi -paste remover, formulated to remove multiple layers of marine coatings and finishes from wood or metal.

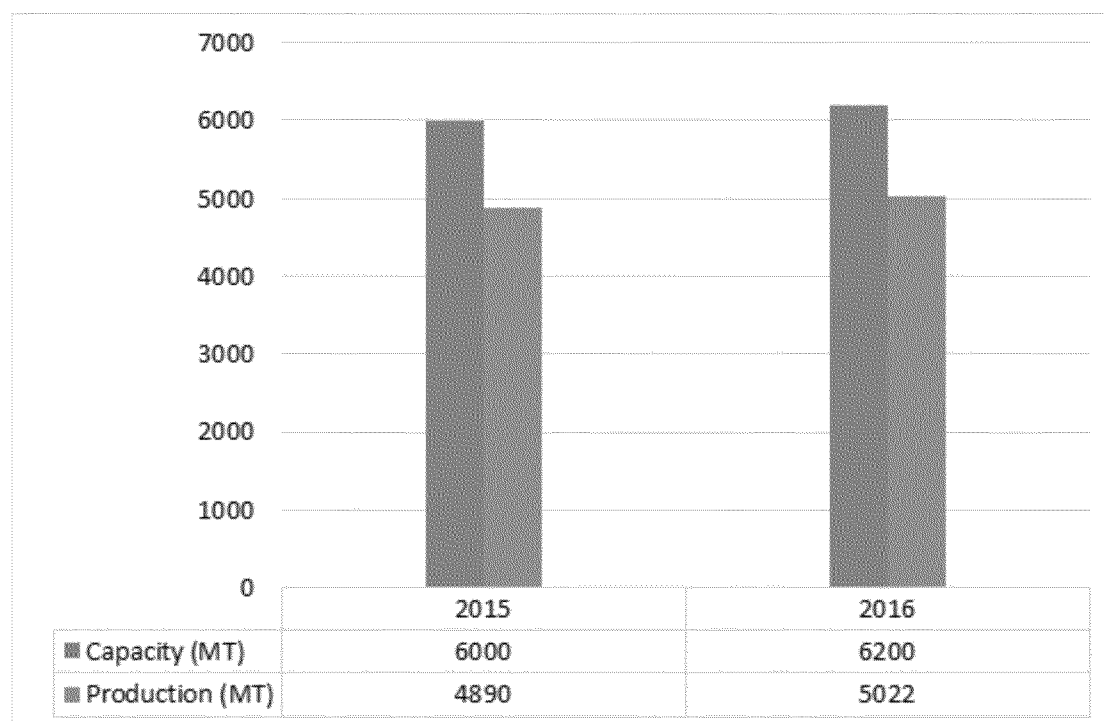
Source: Sunnyside; QYR Chemical & Material Research Center, Feb 2017

### 7.6.3 Sunnyside Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

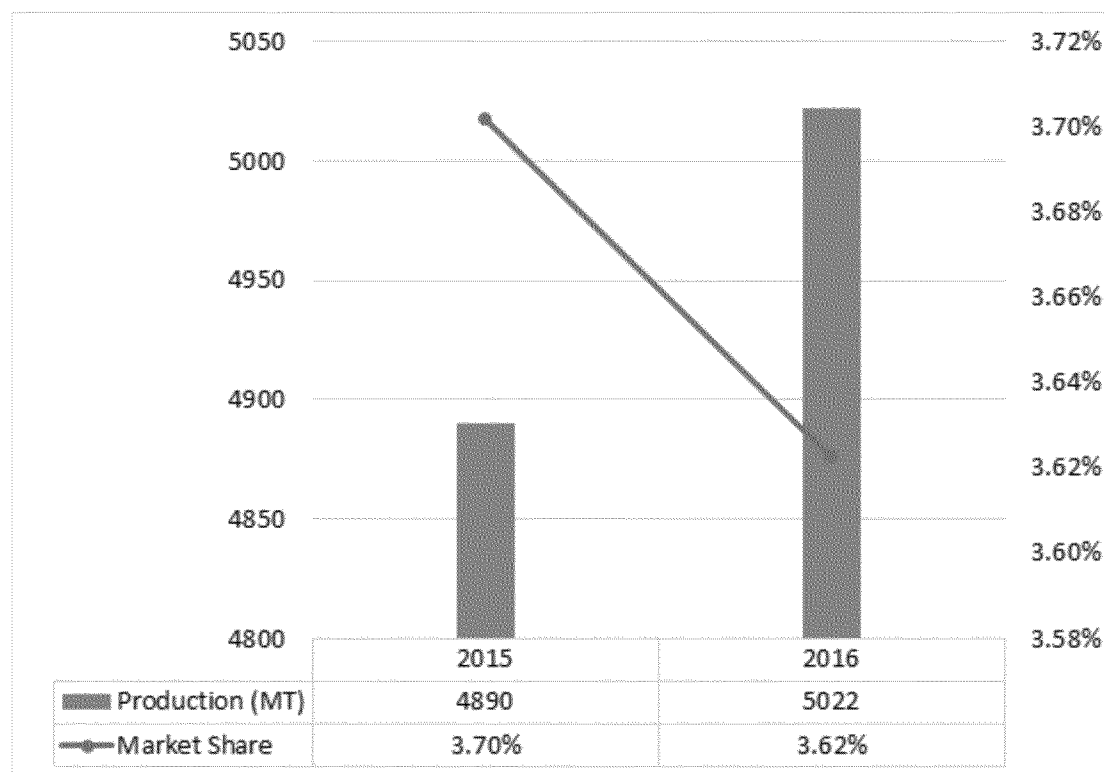
**Table Sunnyside Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity (MT)	6000	6200
Production (MT)	4890	5022
Capacity Utilization Rate	81.50%	81.00%
Price (USD/MT)	6458	6426
Revenue (M USD)	31.58	32.27
Cost (USD/MT)	4836	4844
Gross (USD/MT)	1622	1582
Gross Margin	25.11%	24.62%

Source: Sunnyside; QYR Chemical & Material Research Center, Feb 2017

**Figure Sunnyside Paint Remover Production and Capacity (2015 and 2016)**

Source: Sunnyside; QYR Chemical & Material Research Center, Feb 2017

**Figure Sunnyside Paint Remover Production and Market Share (2015 and 2016)**

Source: Sunnyside; QYR Chemical & Material Research Center, Feb 2017

## 7.6.4 Contact Information

Sunnyside Corporation  
 225 Carpenter Ave  
 Wheeling, IL 60090  
 Toll Free Phone: (800) 323-8611  
 Local Phone: (847) 541-5700  
 Fax: (847) 541-9043

## 7.7 Packaging Service Co.

PSC

### 7.7.1 Company Basic Information

**Table Packaging Service Co. Basic Information**


Item	Contents
Name	Packaging Service Co.
Website	<a href="http://www.packserv.com/">http://www.packserv.com/</a>
Plant Location	US
Company Profile	<p>Packaging Service Co., Inc. (PSC) is a consumer products company, located in Pearland, Texas, providing diverse and high-quality product and service solutions for its customers. Founded in 1971, PSC started as a chemical consumer products packaging firm, servicing the paint, hardware, automotive, grocery and houseware industries with a variety of branded and private label solutions.</p> <p>PSC manufactures home improvement products used primarily for paint sundry projects as well as fuels for lighting and heating. These premium products- sold under the Crown® brand, known as 'The Brand Preferred by Professionals'® for more than 40 years - are available through wholesalers and retailers.</p> <p>PSC is also a full -service contract packager. Our company provides consumer product services including: custom blending, filling and packaging of both water and solvent-based products. As a category expert in branded, private label and contract packaging programs, PSC delivers customized product solutions and value -added services such as: product sourcing, product development, package and label design, planogram and</p>

	inventory management, quality control testing, product blending, supply of bulk chemicals, and delivery of packaged goods.
Key Products	Crown Paint Strip Next, Crown Tuff-Strip
Key Sales Regions	US, EU, etc.
Business History	Since 1971

Source: Packaging Service Co.; QYR Chemical & Material Research Center, Feb 2017

## 7.7.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
<p>Crown® Handi-Strip®</p> 	<p>Crown® Handi -Strip® all -purpose liquid stripper is specially formulated to penetrate crevices and detailed surfaces. This pourable liquid formula is best suited for flat and carved surfaces. Removes paint, varnish, shellac and lacquer. Water-rinsable. Not recommended for use on asphalt tile, fiberglass, linoleum, plastic, rubber, and other synthetic materials.</p>

Source: Packaging Service Co.; QYR Chemical & Material Research Center, Feb 2017

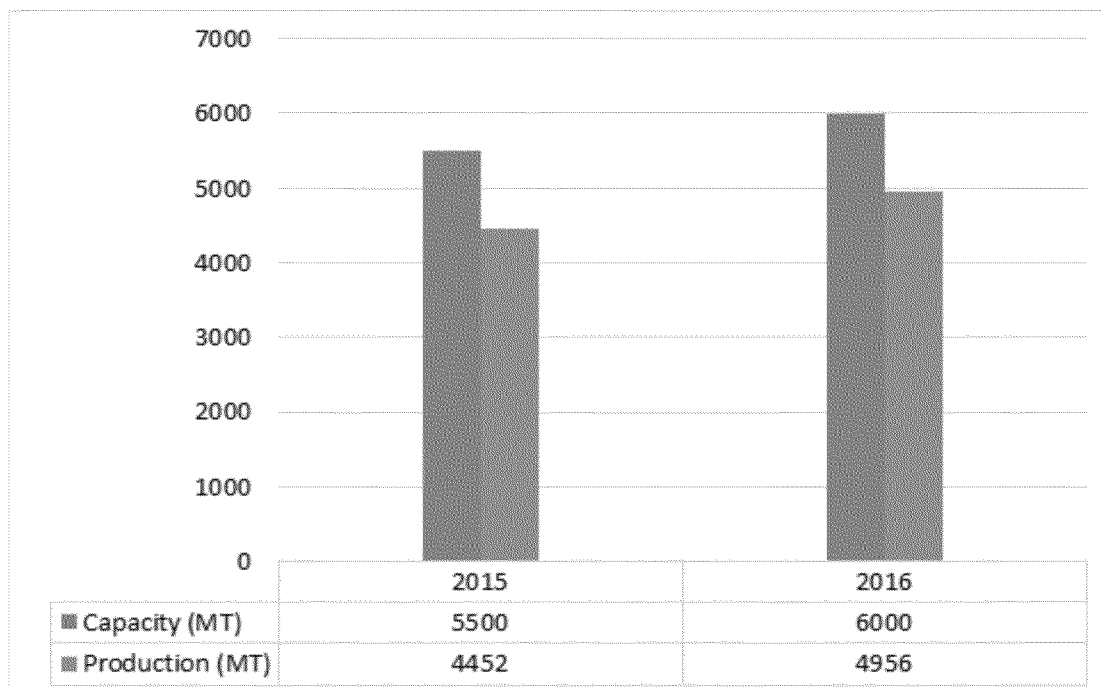
## 7.7.3 Packaging Service Co. Paint Remover Capacity, Production, Revenue, Price and Gross Margin(2015 and 2016)

**Table Packaging Service Co. Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity (MT)	5500	6000
Production (MT)	4452	4956
Capacity Utilization Rate	80.95%	82.60%
Price (USD/MT)	9602	9576
Revenue (M USD)	42.75	47.46
Cost (USD/MT)	6710	6744
Gross (USD/MT)	2892	2832
Gross Margin	30.12%	29.57%

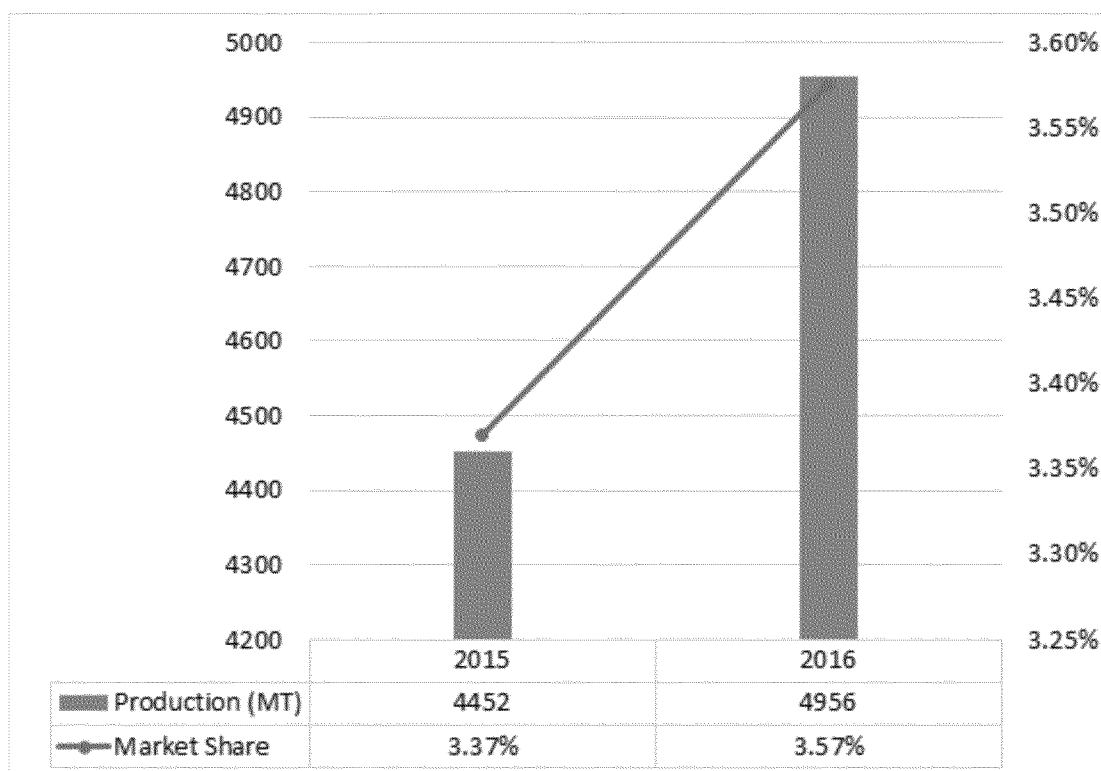
Source: Packaging Service Co.; QYR Chemical & Material Research Center, Feb 2017

**Figure Packaging Service Co. Paint Remover Production and Capacity (2015 and 2016)**



Source: Packaging Service Co.; QYR Chemical & Material Research Center, Feb 2017

**Figure Packaging Service Co. Paint Remover Production and Market Share (2015 and 2016)**

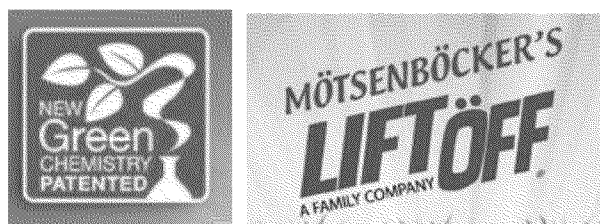


Source: Packaging Service Co.; QYR Chemical & Material Research Center, Feb 2017

## 7.7.4 Contact Information

1904 Mykawa Road  
 Pearland, Texas 77581  
 Voice: 281-485-1458  
 Fax: 281-485-3242  
 Email: info@packserv.com

## 7.8 Motsenbocker



### 7.8.1 Company Basic Information

**Table Motsenbocker Basic Information**

Item	Contents
Name	Motsenbocker
Website	<a href="http://liftoffinc.com/paint-varnish-remover/">http://liftoffinc.com/paint-varnish-remover/</a>
Plant Location	US
Company Profile	<p>Mötsenböcker's Lift Off® nine patented formulas offer a family of cleaners that are water-based, biodegradable, and have low or no VOC's. The line of innovative technologies removes everything from food, beverages and pet stains to paint, varnishes, caulks, adhesives and ink. With a proven track record of getting the job done, Mötsenböcker's Lift Off® products are proof that "green" can work and be competitively priced.</p> <p>In addition to patenting the entire product line of Mötsenböcker's Lift Off®, he has made sure they passed rigorous consumer tests. Proving its effectiveness, Mötsenböcker's Lift Off® has the only products of its kind that have earned an "A" rating in the United States for efficacy on all its applications and a variety of surfaces tested, as well as Green Cross Certification for biodegradability awarded by Scientific Certification Systems.</p> <p>The products are formulated for application on specific types of stains, rather than only on specific surfaces. At the same time, the products can be applied safely and are effective at cleaning a variety of surfaces,</p>



including clothing, walls, floors, carpets, dry erase boards, counter-tops, automobiles (exteriors and interiors), office equipment, metals, stone, brick and concrete. All of the formulations are numbered and color-coded, so that you can quickly identify and use the Mötsenböcker's Lift Off® product that is right for your application.

Looking back at the creation of Mötsenböcker's Lift Off®, they were developed to be technologically advanced, exceeding the environmental standards that were previously set. Mötsenböcker's Lift Off® products, by being so different, so advanced, had to overcome some unexpected obstacles. They included skeptical buyers who were slow to understand the technology and challenged the concept: environmentally safe, water-based products that work effectively on a multitude of surfaces and applications, and are competitively priced.

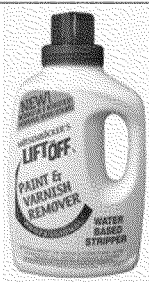
As an expert of Retention of Air Quality with 20 years of experience, Douglas J. Raymond of Raymond Regulatory Resources, represents the aerosol industry covering all regulatory issues throughout the United States and Canada. Below are his articles for "Spray Technology & Marketing Magazine."

Key Products	NEW Hand Cleaner & Conditioner , Stain Remover , Tape Remover, Markers Pens Inks Remover, Spray Paint Graffiti Remover, Latex Paint Remover, PVR Paint & Varnish Remover, FSR Sealant Remover, Stain Remover Kit, Craft & Hobby, Office & Stationery, All Surface Paint Prep
Key Sales Regions	US, EU, etc.
Business History	Since 1980s

Source: Molsenbocker, QYR Chemical & Material Research Center, Feb 2017

## 7.8.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

	Figure	Description
Paint & Varnish Remover		This gel works faster than traditional solvent – based formulas by breaking down the molecular bonds within minutes of application, while being safe and easy to use! Our patented formulation successfully strips enamels and acrylic paints, shellacs, varnishes and other solvent and water-borne coatings and stains.

Source: Molsenbocker, QYR Chemical & Material Research Center, Feb 2017

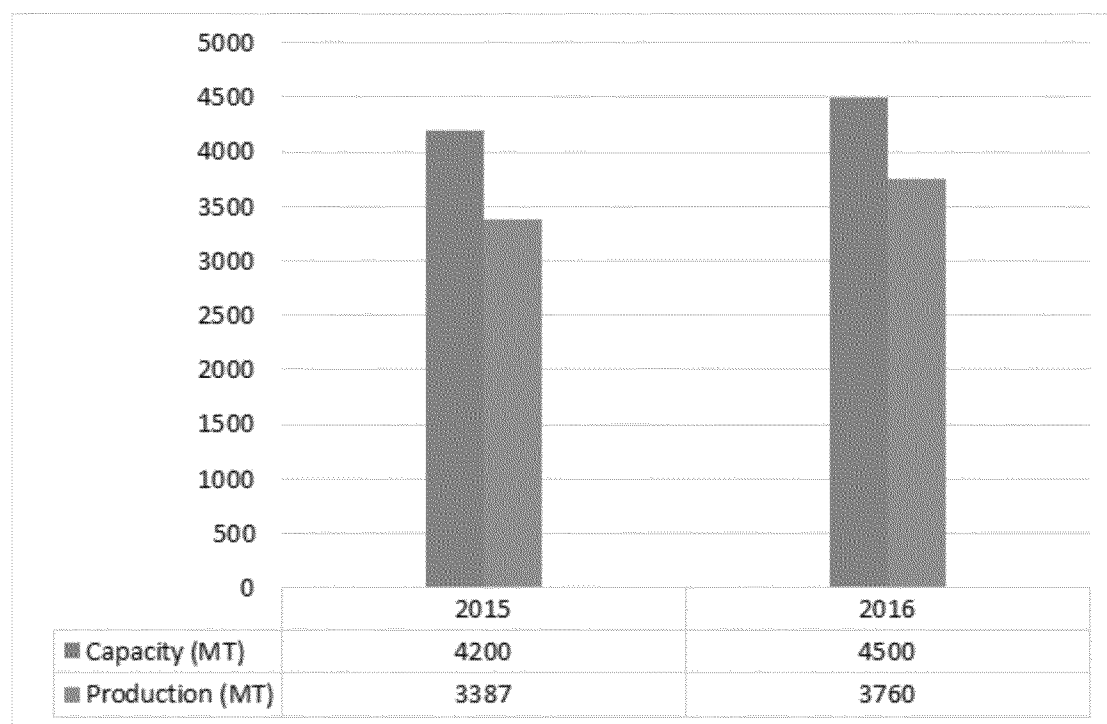
### 7.8.3 Motsenbocker Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

**Table Motsenbocker Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity (MT)	4200	4500
Production (MT)	3387	3760
Capacity Utilization Rate	80.64%	83.56%
Price (USD/MT)	8572	8540
Revenue (M USD)	29.03	32.11
Cost (USD/MT)	6331	6383
Gross (USD/MT)	2241	2157
Gross Margin	26.14%	25.26%

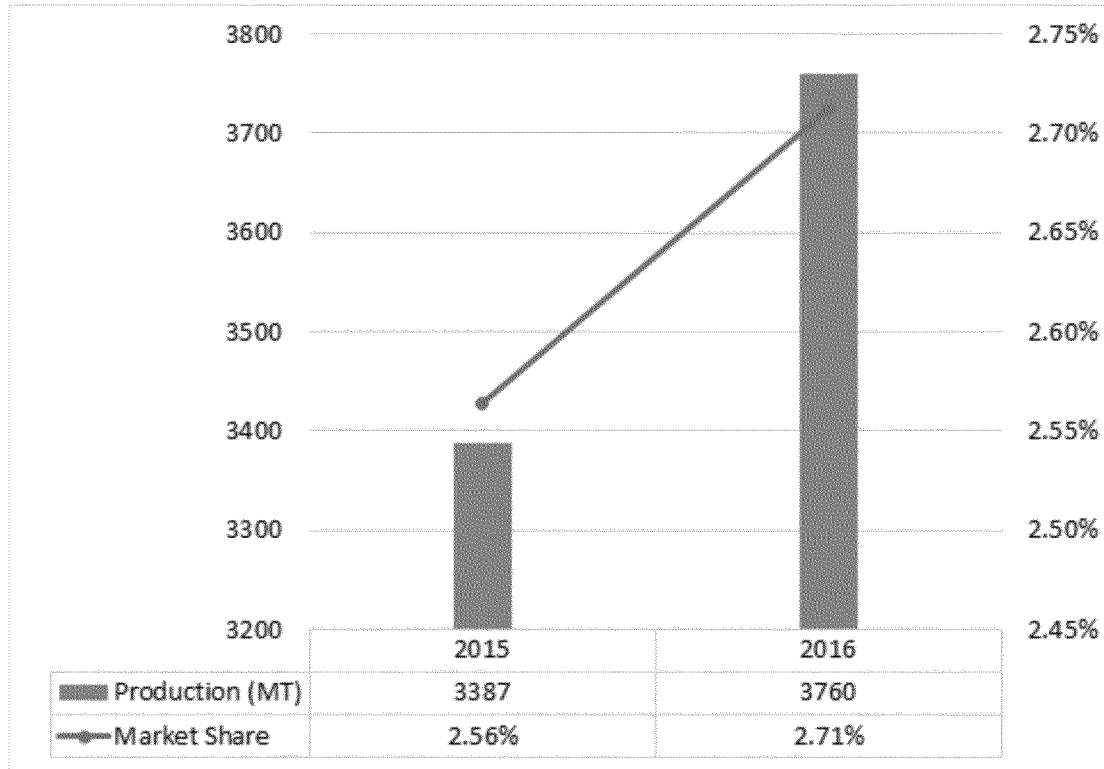
Source: Motsenbocker; QYR Chemical & Material Research Center, Feb 2017

**Figure Motsenbocker Paint Remover Production and Capacity (2015 and 2016)**



Source: Motsenbocker; QYR Chemical & Material Research Center, Feb 2017

**Figure Motsenbocker Paint Remover Production and Market Share (2015 and 2016)**



Source: Motsenbocker; QYR Chemical & Material Research Center, Feb 2017

## 7.8.4 Contact Information

Phone: 800 – 346 – 1633

Mailing Address

Stoner Inc.

PO Box 65

Quarryville, PA 17566

## 7.9 Akzonobel



## 7.9.1 Company Basic Information

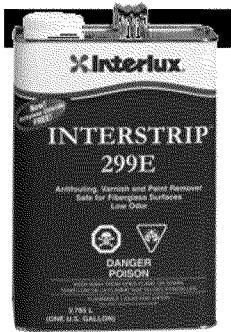
**Table Akzonobel Basic Information**

Item	Contents
Name	Akzonobel
Website	<a href="https://www.akzonobel.com/">https://www.akzonobel.com/</a>
Plant Location	US, EU (Netherlands)
Company Profile	<p>AkzoNobel is a leading global paints and coatings company and a major producer of specialty chemicals.</p> <p>They supply industries and consumers worldwide with innovative products and are passionate about developing sustainable answers for our customers.</p> <p>Their portfolio includes well -known brands such as Dulux, Sikkens, International and Eka. Headquartered in Amsterdam, the Netherlands, they are consistently ranked as one of the leaders in the area of sustainability.</p> <p>With operations in more than 80 countries, our 50,000 people around the world are committed to delivering leading products and technologies to meet the growing demands of our fast -changing world.</p>
Key Products	Paints, Coatings and Specialty Chemicals
Key Sales Regions	US, EU, etc.
Business History	Formed in 1881, the Interlux® brand has become synonymous with the highest standard of care for all kinds of vessels and established as an integral part of boat building and maintenance.

Source: Akzonobel; QYR Chemical & Material Research Center, Feb 2017

## 7.9.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
<p>Interlux</p> 	<p>Area Above or below the waterline</p> <p>Finish/Sheen: Not Applicable</p> <p>Pack sizes: 1 US Quart 1 US Gallon 2.5 US Gallon</p> <p>Substrates: Suitable for high fouling areas</p> <p>Application Method: Recommended</p> <p>No. Of Coats</p> <p>Practical Coverage (ft<sup>2</sup> /Gal)</p> <p>Thinner</p>

Source: Akzonobel; QYR Chemical & Material Research Center, Feb 2017

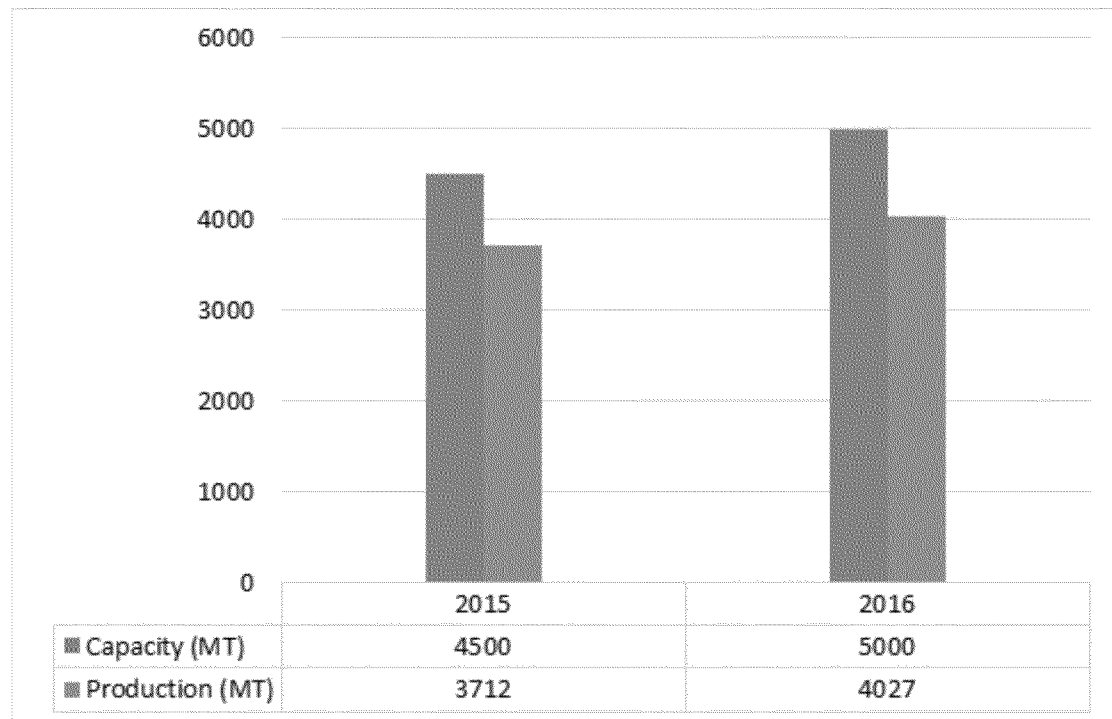
### 7.9.3 Akzonobel Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

**Table Akzonobel Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

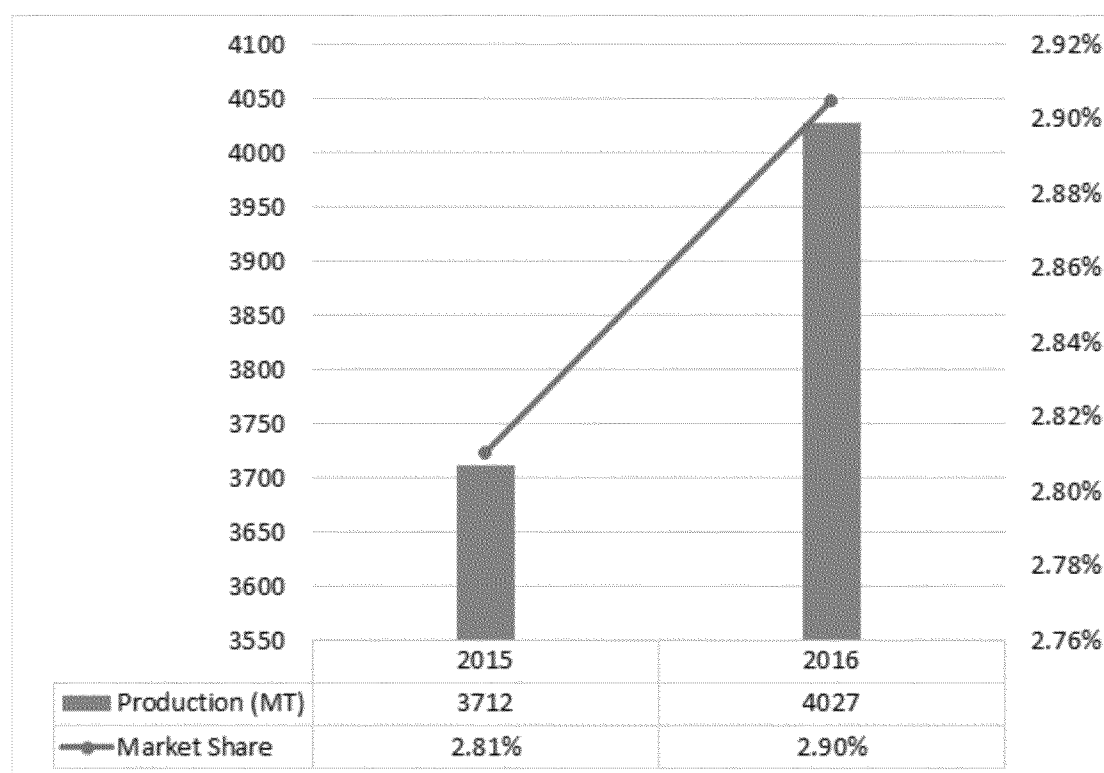
	2015	2016
Capacity (MT)	4500	5000
Production (MT)	3712	4027
Capacity Utilization Rate	82.49%	80.54%
Price (USD/MT)	6960	6928
Revenue (M USD)	25.84	27.90
Cost (USD/MT)	5098	5182
Gross (USD/MT)	1862	1746
Gross Margin	26.75%	25.20%

Source: Akzonobel; QYR Chemical & Material Research Center, Feb 2017

**Figure Akzonobel Paint Remover Production and Capacity (2015 and 2016)**



Source: Akzonobel; QYR Chemical & Material Research Center, Feb 2017

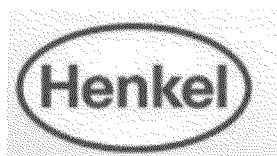
**Figure Akzonobel Paint Remover Production and Market Share (2015 and 2016)**

Source: Akzonobel; QYR Chemical & Material Research Center, Feb 2017

## 7.9.4 Contact Information

International Paint LLC  
 6001 Antoine Dr.  
 Houston, Texas 77091  
 Tel: 1 713 682-1711  
 Fax: 1 713 684-1301

## 7.10 Henkel



### 7.10.1 Company Basic Information

**Table Henkel Basic Information**


Item	Contents
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Name	Henkel
Website	<a href="http://www.henkelna.com/">http://www.henkelna.com/</a>
Plant Location	China, US, EU
Company Profile	<p>Henkel is the name behind some of America's favorite brands. From Dial® soaps to Purex® laundry detergents, Right Guard® antiperspirants, g ö t2b® hair styling products, and Loctite® adhesives, Henkel brands are part of your daily life.</p> <p>Henkel operates worldwide with leading brands and technologies in three business areas:</p> <p>Laundry &amp; Home Care</p> <p>Beauty Care</p> <p>Adhesive Technologies</p> <p>Looking back on nearly 140 years of success, Henkel's vision is to become a global leader in brands and technologies. Henkel holds globally leading market positions both in the consumer and industrial sector today and is well known for brands such as Persil, Schwarzkopf and Loctite. The company is organized into three globally operating business units: Laundry &amp; Home Care, Beauty Care and Adhesive Technologies. The Dax-30 company is headquartered in Düsseldorf, Germany, and proud of its almost 50,000 employees from more than 120 nations worldwide.</p> <p>Henkel is globally active and has a strong presence in emerging markets. In North America, Henkel has about 6,200 employees in 51 facilities across the U.S. and Canada. Henkel has grown rapidly in North America during the past decade and now generates about 18 percent of worldwide sales in this region.</p>
Key Products	BONDERITE® Paint Strippers
Key Sales Regions	US, EU, Asia, etc.
Business History	Since 1875

Source: Henkel; QYR Chemical & Material Research Center, Feb 2017

## 7.10.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

	Figure	Description
Bonderite C-MC 21130		Bonderite C-MC 21130 is remarkably simple to use. Simply apply with a brush or spray gun and wipe the paint away with a cloth. The cleanliness of the outcome is apparent within minutes. The innovative water -borne cleaner is ideal for use in all firms and production facilities that use paints and coatings, serving as an effective

replacement for conventional –  
potentially dangerous, toxic and  
combustible – solvent-based cleaners.

Source: Henkel; QYR Chemical & Material Research Center, Feb 2017

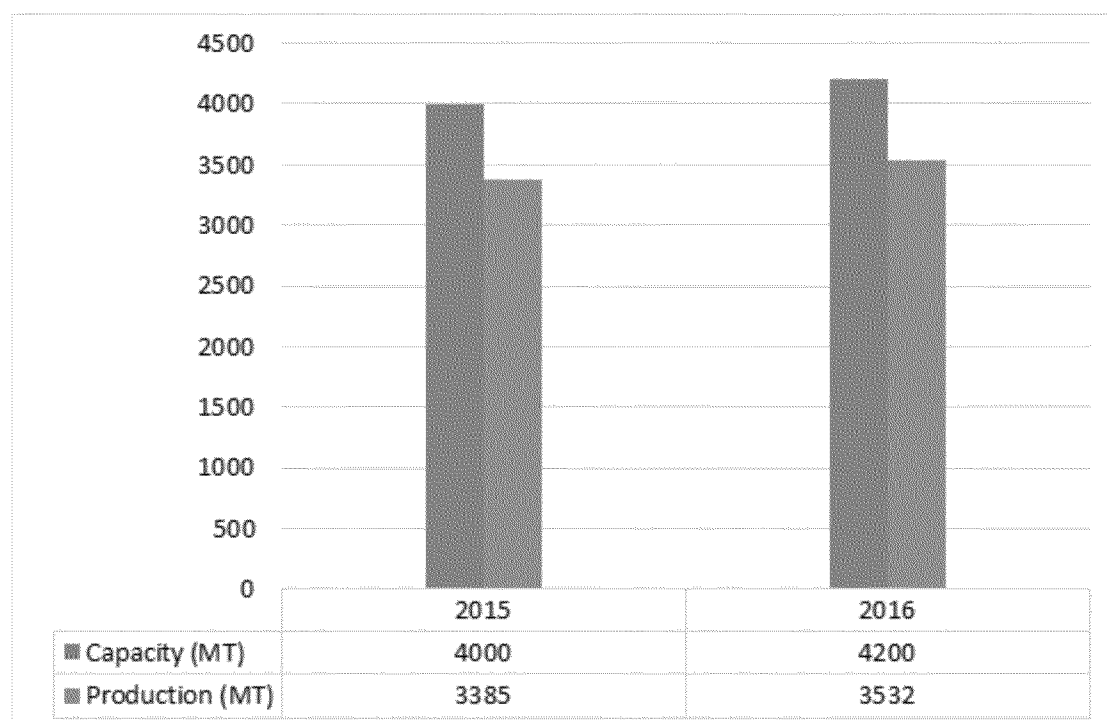
### 7.10.3 Henkel Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

**Table Henkel Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity (MT)	4000	4200
Production (MT)	3385	3532
Capacity Utilization Rate	84.63%	84.10%
Price (USD/MT)	8412	8388
Revenue (M USD)	28.47	29.63
Cost (USD/MT)	5884	5927
Gross (USD/MT)	2528	2461
Gross Margin	30.05%	29.34%

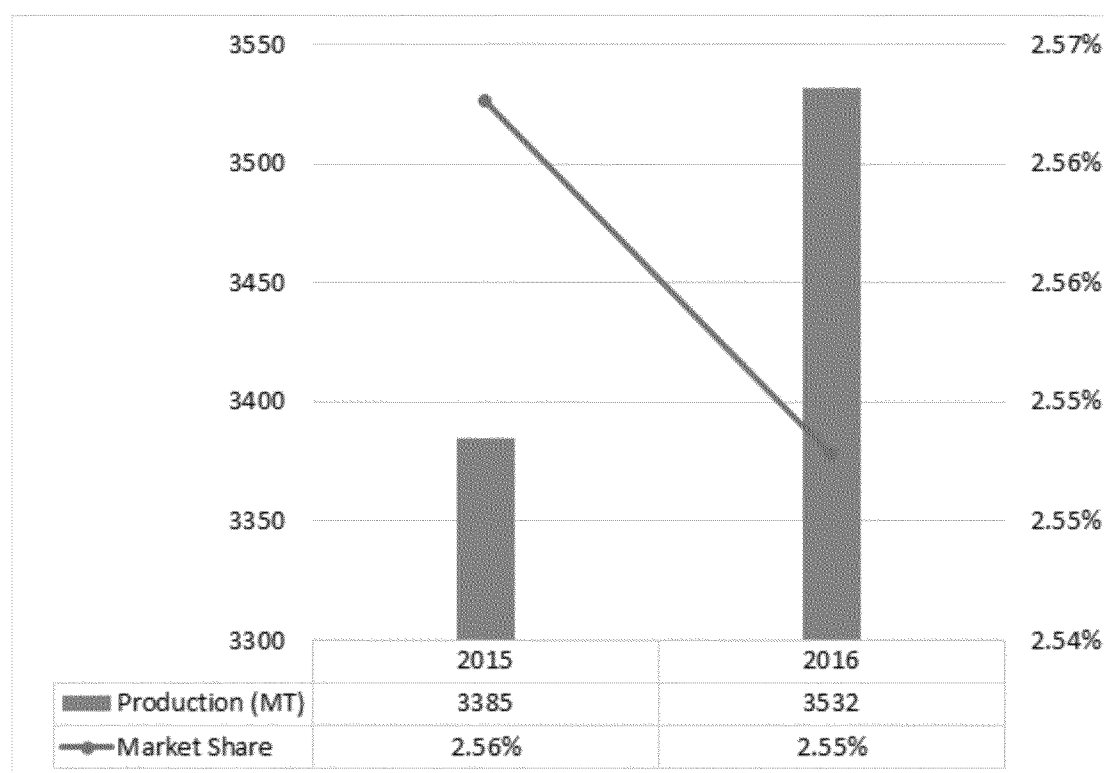
Source: Henkel; QYR Chemical & Material Research Center, Feb 2017

**Figure Henkel Paint Remover Production and Capacity (2015 and 2016)**



Source: Henkel; QYR Chemical & Material Research Center, Feb 2017



**Figure Henkel Paint Remover Production and Market Share (2015 and 2016)**

Source: Henkel; QYR Chemical & Material Research Center, Feb 2017

## 7.10.4 Contact Information

One Henkel Way  
 Rocky Hill, CT 06067  
 United States  
 Tel: +1-860-571-5100  
 E-mail: +1-860-571-5465

## 7.11 3M



### 7.11.1 Company Basic Information

**Table 3M Basic Information**

Item	Contents
------	----------

Name	3M
Website	<a href="http://www.3m.com/">http://www.3m.com/</a>
Plant Location	US
Company Profile	3M is a global innovation company that never stops inventing. Over the years, our innovations have improved daily life for hundreds of millions of people all over the world. We have made driving at night easier, made buildings safer, and made consumer electronics lighter, less energy -intensive and less harmful to the environment. We even helped put a man on the moon. Every day at 3M, one idea always leads to the next, igniting momentum to make progress possible around the world.
Key Products	Safest Stripper™ Paint and Varnish Remover
Key Sales Regions	US, EU, etc.
Business History	Since 1902

Source: 3M; QYR Chemical & Material Research Center; Feb 2017

## 7.11.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
Safest Stripper™ 	General Physical Form: Liquid Odor, Color, Grade: Off white color slight ester odor Odor threshold: No Data Available pH: Approximately 7 Boiling Point: $\geq 100$ °C

Source: 3M; QYR Chemical & Material Research Center; Feb 2017

## 7.11.3 3M Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

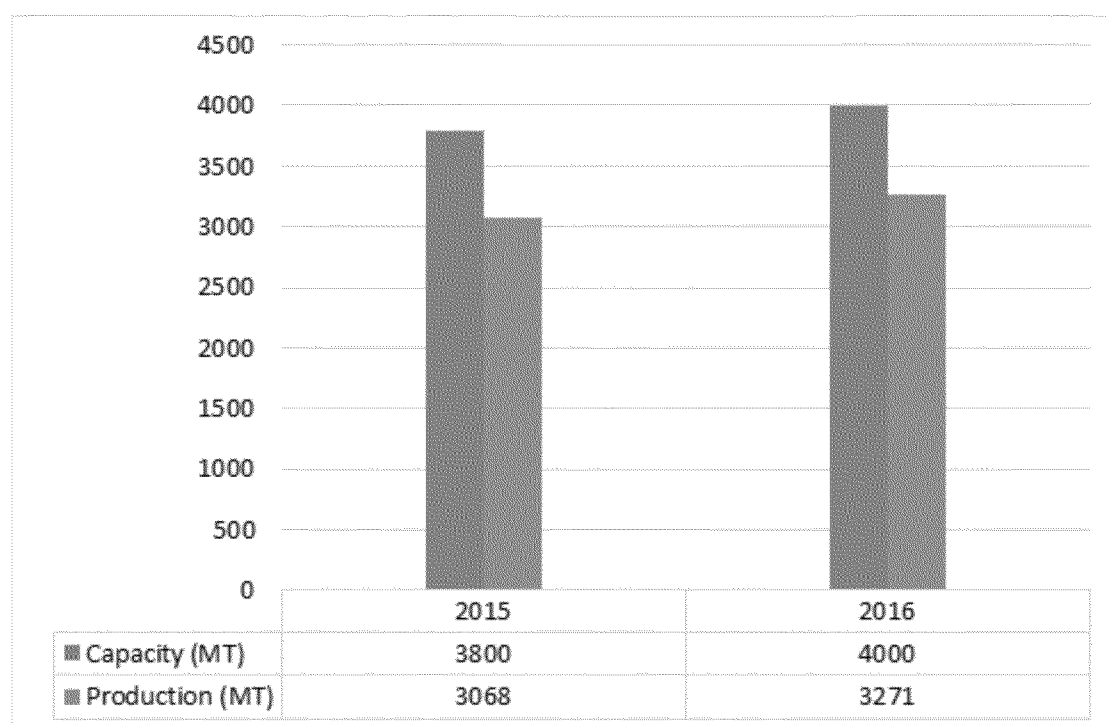
**Table 3M Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity (MT)	3800	4000
Production (MT)	3068	3271
Capacity Utilization Rate	80.74%	81.78%

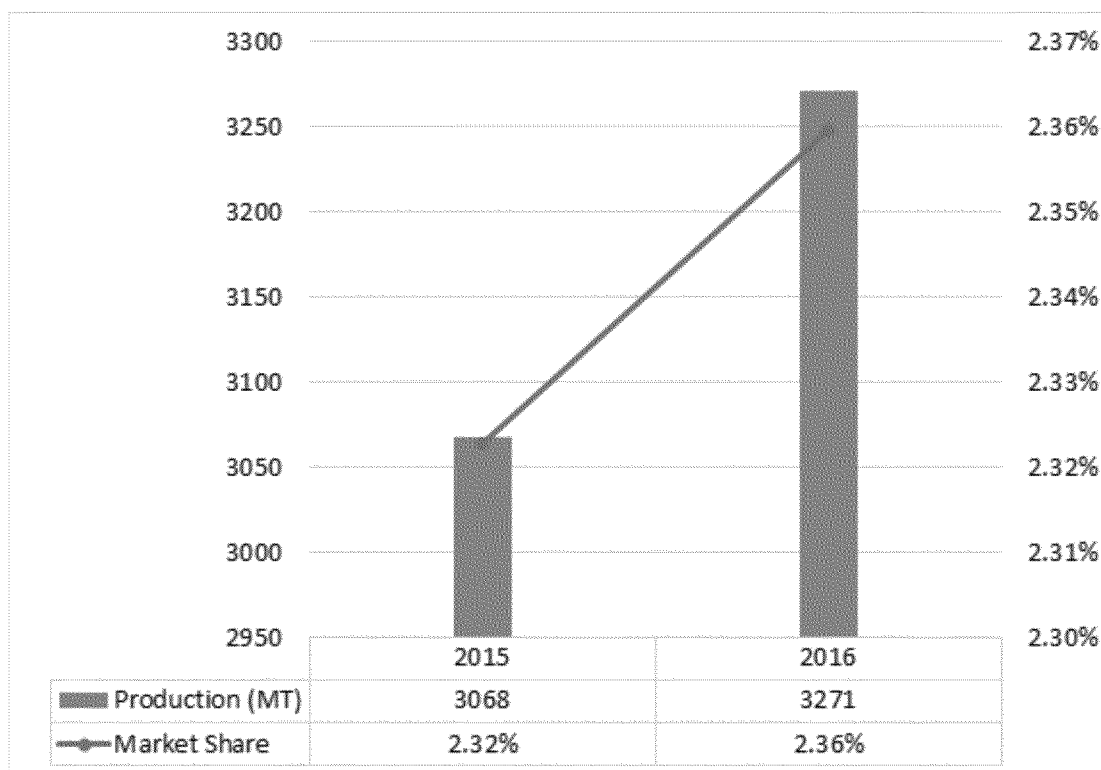
Price (USD/MT)	11646	11620
Revenue (M USD)	35.70	38.00
Cost (USD/MT)	7665	7685
Gross (USD/MT)	3981	3935
Gross Margin	34.18%	33.86%

Source: 3M; QYR Chemical & Material Research Center; Feb 2017

**Figure 3M Paint Remover Production and Capacity (2015 and 2016)**



Source: 3M; QYR Chemical & Material Research Center; Feb 2017

**Figure 3M Paint Remover Production and Market Share (2015 and 2016)**

Source: 3M; QYR Chemical & Material Research Center; Feb 2017

## 7.11.4 Contact Information

3M Center  
 St. Paul, MN 55144  
 Phone: 1-888-3M HELPS  
 (1-888-364-3577)

## 7.12 Green Products



## 7.12.1 Company Basic Information

**Table Green Products Basic Information**

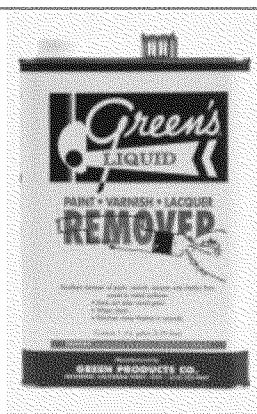
Item	Contents
Name	Green Products
Website	<a href="http://www.coppergreen.com/">http://www.coppergreen.com/</a>
Plant Location	US
Company Profile	<p>Green Products Company was started in 1944 by Robert and Eve Hartford in Berkeley, Ca. At that time the owners sold under contract drums of paint removers to the U.S. Navy for paint removal on their ships.</p> <p>After World War II the owners developed a thin liquid paint remover for the removal of lacquer and varnish from antique furniture. The company becomes famous and well known in the antique furniture market for producing a quality product.</p> <p>The Green's name and logo came about because the company was located next to a railroad line and Mr. Hartford decided that a railroad signal with a green light represents a safe name and logo for his company. The green lighted railroad signal indicates the railroad crossing is clear ahead for the train engineer to proceed. Since then the motto has been "Go with Green's the best paint removers". Mr. Hartford was so successful that he purchased the property and building where the company was located.</p> <p>In 1958 the company and property was sold to Murrey Rosen who operated the company until his retirement in 1980 when Sid Rosen his son took over the company. Sid Rosen was instrumental in increasing the market share of the company by introducing the products to large building material distributors.</p> <p>In 1991 Green Products Co, a California corporation purchased the assets and formulas from Green Chemicals Inc. These assets were added to the assets of the new corporation located in Richmond, California.</p> <p>In 1993 Green Products Co, purchased the assets and select product lines of Willard Products Co of Redwood City. These items were added to the lines of company product lines in Richmond, California.</p>
Key Products	GREEN'S LIQUID, GREEN'S SEMI-PASTE REMOVER, etc.
Key Sales Regions	US, EU, etc.
Business History	Since 1944

Source: Green Products; QYR Chemical & Material Research Center, Feb 2017

## 7.12.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
--------	-------------



Boiling Point: 232.00 Deg F  
 Vapor Pressure: 355.00 mm Hg @ 68.00 Deg F  
 Specific Vapor Density: Greater than air  
 Specific Gravity: .96  
 Percent Volatile: 73%  
 VOC\*:  
 2.64lbs/Per Gallon of Paint Remover  
 or 316Lbs Grams Per Liter  
 Evaporation Rate: Slower than ether

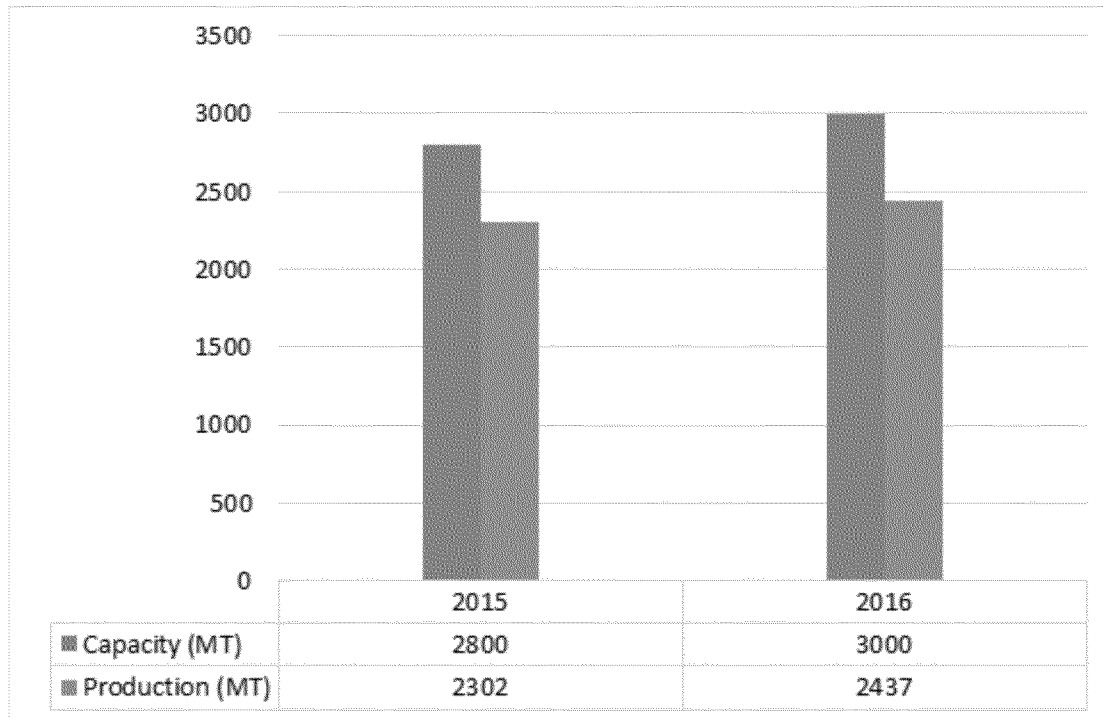
Source: Green Products; QYR Chemical & Material Research Center; Feb 2017

### 7.12.3 Green Products Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

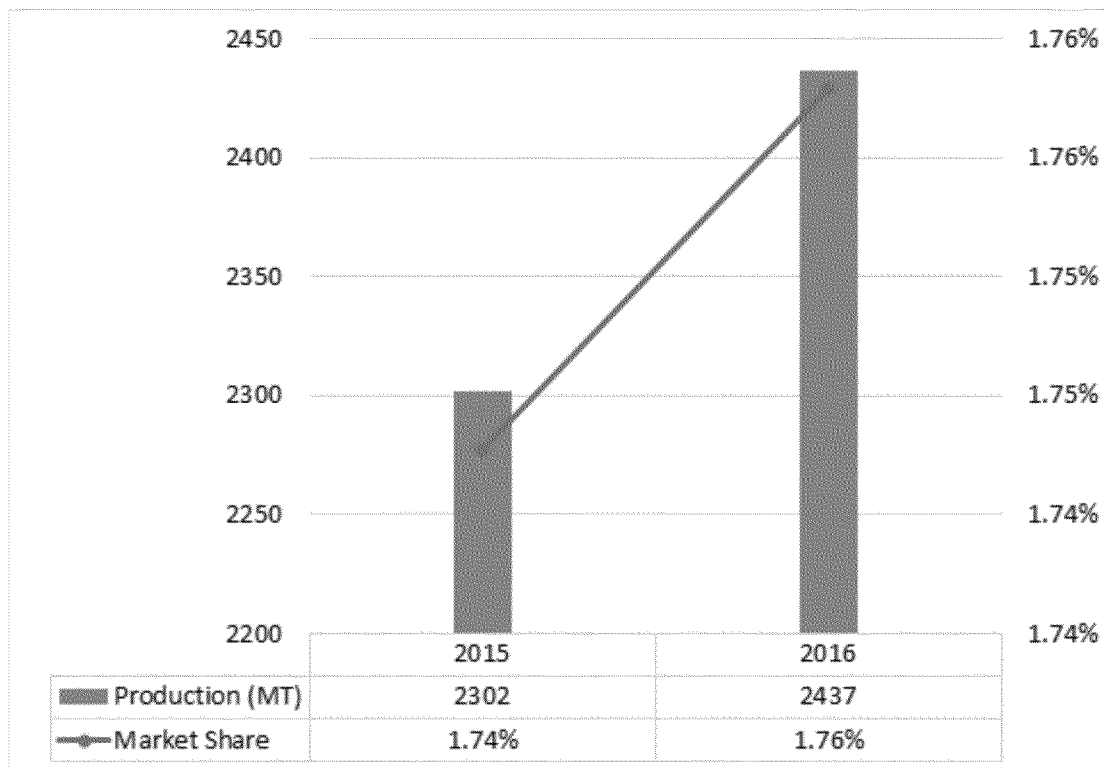
**Table Green Products Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity (MT)	2800	3000
Production (MT)	2302	2437
Capacity Utilization Rate	82.21%	81.23%
Price (USD/MT)	9588	9207
Revenue (M USD)	22.07	22.44
Cost (USD/MT)	7217	7149
Gross (USD/MT)	2371	2058
Gross Margin	24.73%	22.35%

Source: Green Products; QYR Chemical & Material Research Center; Feb 2017

**Figure Green Products Paint Remover Production and Capacity (2015 and 2016)**

Source: Green Products; QYR Chemical & Material Research Center; Feb 2017

**Figure Green Products Paint Remover Production and Market Share (2015 and 2016)**

Source: Green Products; QYR Chemical & Material Research Center; Feb 2017

## 7.12.4 Contact Information

810 Market Avenue, RichmondCA 94801

Tel: (510) 235-9667

## 7.13 3X: Chemistry



### 7.13.1 Company Basic Information

**Table 3X: Chemistry Basic Information**

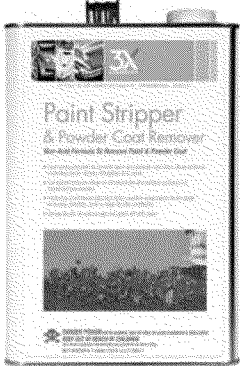
Item	Contents
Name	3X: Chemistry
Website	<a href="http://www.3xchemistry.com/">http://www.3xchemistry.com/</a>
Plant Location	US
Company Profile	<p>We Are The Maintenance &amp; Restoration Solutions People</p> <p>There is a certain satisfaction that comes with doing a job yourself, and doing it right. Where most would fear the task, you face it with the passion and vigor that only another DIY would understand. At 3X: Chemistry we understand, because like you, we are enthusiasts and DIY. But we also get the grueling labor and expense involved when products don't perform as promised.</p> <p>That's why we created a full line of maintenance and restoration chemicals that provide easy to use, yet effective solutions for making those projects a little less painful. Every 3X: Chemistry product is formulated and manufactured with the highest quality materials for maximum performance....or what we like to call the "wow" factor.</p> <p>So next time you're faced with a project most consider a chore, 3X: Chemistry will be there with you to tackle it together. After all, it's what DIY do.</p>
Key Products	Paint Stripper & Powder Coat Remover
Sales Regions	US, EU, etc.
Business History	Since 1980s

Source: 3X: Chemistry; QYR Chemical & Material Research Center; Feb 2017



## 7.13.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
	<p>Simply spray or brush 3X: Chemistry Paint Stripper on and scrub the paint off with ease. Safe on factory fiberglass (will not affect Gel Coat), metal or wood. Non-acid formula contains a chemical seal to prevent evaporation of paint removing solvents, even in high-humidity. Most cars require 3 -4 gallons for complete removal. Nonflammable.</p> <p>Fast-acting solution to remove paint and powder coat from most surfaces including metal, factory fiberglass and wood</p> <p>Gel based formula clings to all horizontal and vertical surfaces for maximum penetration</p> <p>Produces a chemical seal that helps prevent evaporation of the paint removing solvents, even in high-humid conditions</p>

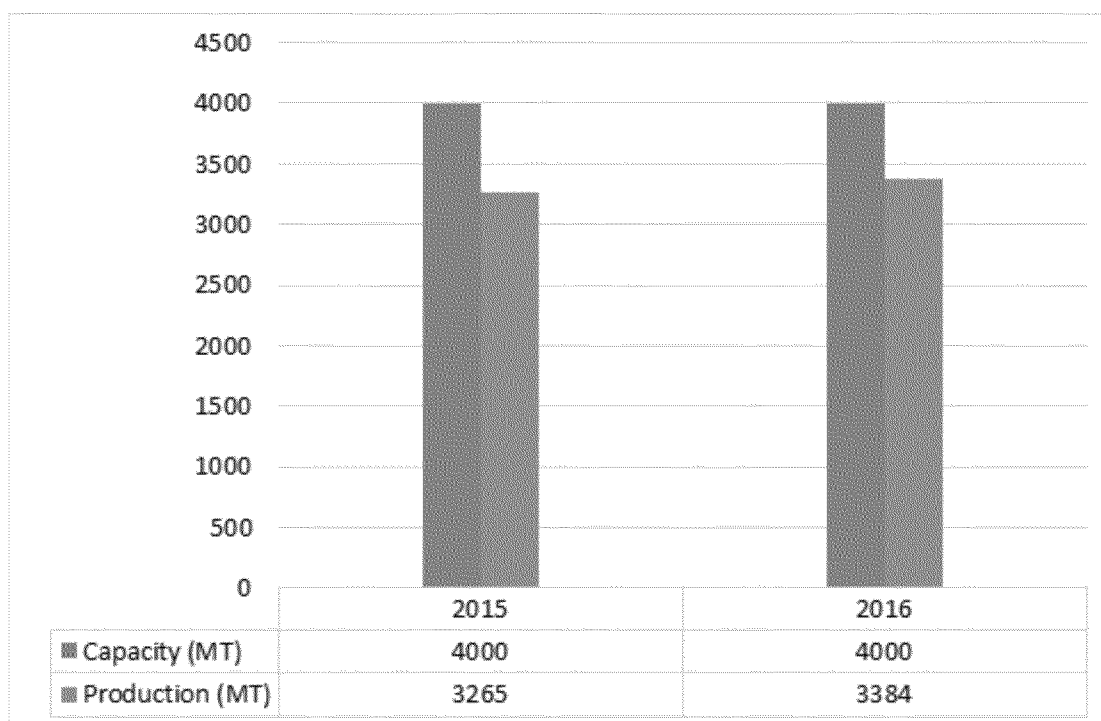
Source: 3X: Chemistry; QYR Chemical & Material Research Center; Feb 2017

## 7.13.3 3X: Chemistry Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

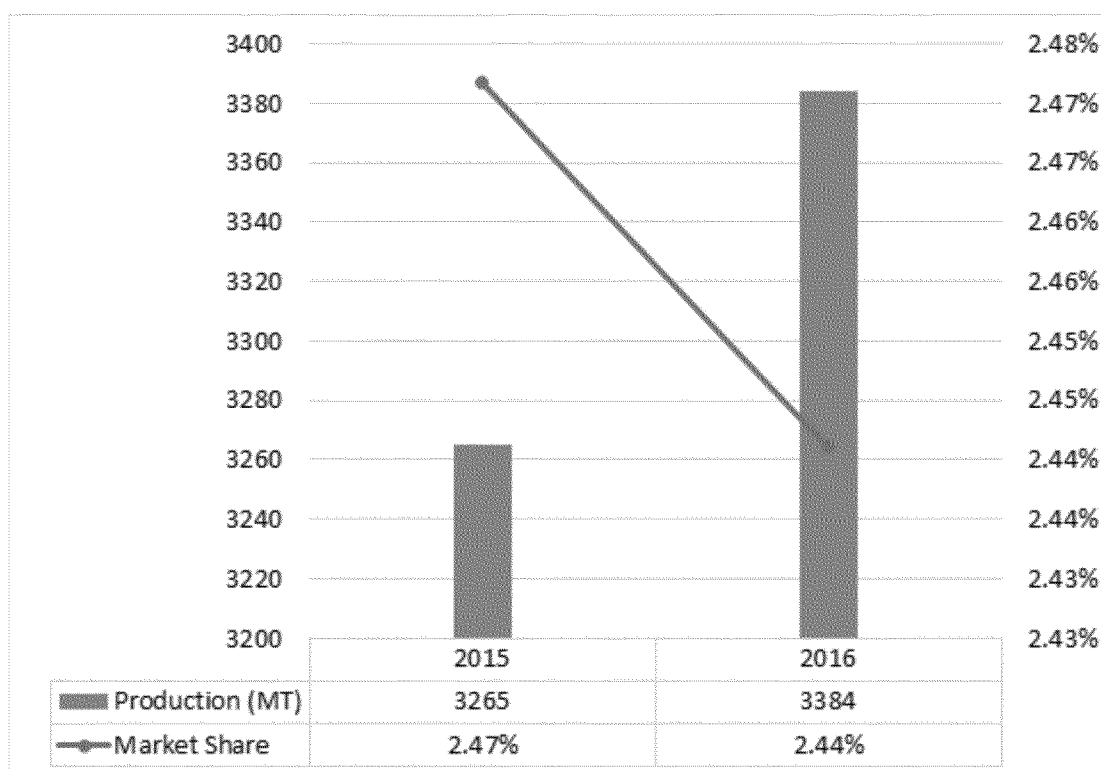
**Table 3X: Chemistry Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity (MT)	4000	4000
Production (MT)	3265	3384
Capacity Utilization Rate	81.63%	84.60%
Price (USD/MT)	15706	15682
Revenue (M USD)	51.3	53.1
Cost (USD/MT)	11685	11743
Gross (USD/MT)	4021	3939
Gross Margin	25.60%	25.12%

Source: 3X: Chemistry; QYR Chemical & Material Research Center; Feb 2017

**Figure 3X: Chemistry Paint Remover Production and Capacity (2015 and 2016)**

Source: 3X: Chemistry; QYR Chemical & Material Research Center, Feb 2017

**Figure 3X: Chemistry Paint Remover Production and Market Share (2015 and 2016)**

Source: 3X: Chemistry; QYR Chemical & Material Research Center, Feb 2017

## 7.13.4 Contact Information

Website: <http://www.3xchemistry.com/>

## 7.14 Franmar Chemical



### 7.14.1 Company Basic Information

**Table Franmar Chemical Basic Information**

Item	Contents
Name	Franmar Chemical
Website	<a href="http://www.franmar.com/">http://www.franmar.com/</a>
Plant Location	US
Company Profile	<p>More than anything else, Frank Sliney is a problem solver. From his early introduction to the screen Printing industry at trade shows, and in the normal course of building a business, Fran realized that the existing chemistry used by screen printers was not only unhealthy and unsafe, it was not good for our environment.</p> <p>Frank's awareness of soy's ability to replace the highly toxic and expensive petrochemicals used by screen printers gave him the vision of providing a safer, more economical workplace. With the assistance and support of his wife, Marilyn, the couple started down a path of chemistry and innovation, seeking natural products that could do the job safely and affordably. Their implementation of their vision proved that safe cleaning with natural products was possible and their actions have helped fuel a change - for the better - to cleaning techniques and philosophies throughout the world.</p> <p>The first soy based product Frank formulated, BEAN-e-doo®, replaced the use of mineral spirits, xylene, toluene, even gasoline, in screen printing cleaning operations. As all screen printers will tell you, it was an amazing innovation. BEAN-e-doo® was born! And from that exciting first innovation, product after product, supporting industry after industry, has emerged. Throughout all of the innovations, all of the research and development, Frank and Marilyn have guided Franmar's growth with this simple principle: provide an efficient product that is economical to purchase, and safe to use. Today, many call this "Green". At Franmar we</p>

reger to it as doing the right thing!

Franmar has now gained worldwide acclaim for its effective, economical, and safe product lines all developed to benefit workers and their environment. Owners Frank and Marilyn are still very involved in the company. They work closely with their executive team to keep the deep-rooted values of hard work and service excellence as a company priority.


Throughout its 30 -year history, Franmar has worked closely with the United Soybean Board, even occasionally receiving some USB research and development funds. Farmers participate in the USB soybean checkoff, whereby they collectively invest a portion of their profits to fund soy research and promotion. With assistance from USB checkoff funds for R&D, combined with Franmar's own R&D and marketing funds, Franmar has very successfully increased the market for products made from soy oil.

Key Products	BLUE BEAR Paint & Urethane Stripper Lead Based, Paint & Urethane Stripper, etc.
Key Sales Regions	US, EU, etc.
Business History	Since 1980s

Source: Franmar Chemical; QYR Chemical & Material Research Center, Feb 2017

## 7.14.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
Soy Gel 	Formerly Known as SOY-Gel Paint and Urethane Remover Removes Paints, Urethanes, Enamels, Sealers, Some Epoxies, and Many Other Coatings Non-Caustic, Biodegradable, No Toxic Fumes Removes Multiple Layers in One Application SAFE! No Methylene Chloride Safe for Use Indoors

Source: Franmar Chemical; QYR Chemical & Material Research Center, Feb 2017

## 7.14.3 Franmar Chemical Paint Remover Capacity, Production, Revenue, Price and Gross Margin(2015 and 2016)

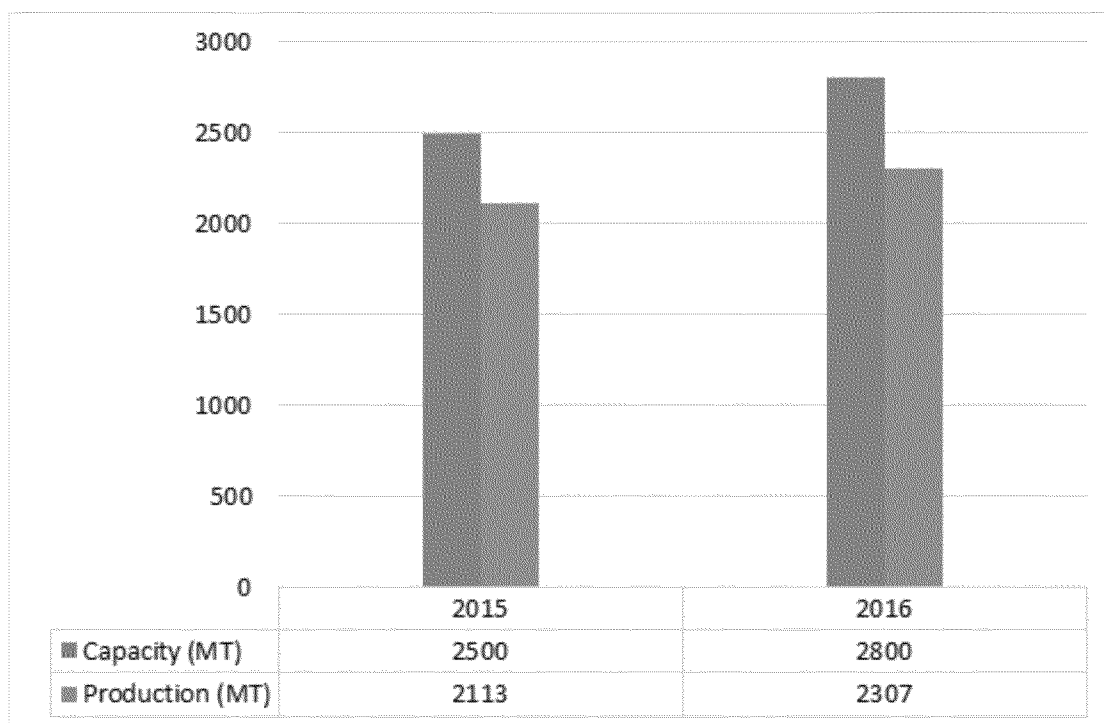
**Table Franmar Chemical Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
--	------	------

Capacity (MT)	2500	2800
Production (MT)	2113	2307
Capacity Utilization Rate	84.52%	82.39%
Price (USD/MT)	6480	6461
Revenue (M USD)	13.69	14.91
Cost (USD/MT)	4811	4919
Gross (USD/MT)	1669	1542
Gross Margin	25.75%	23.86%

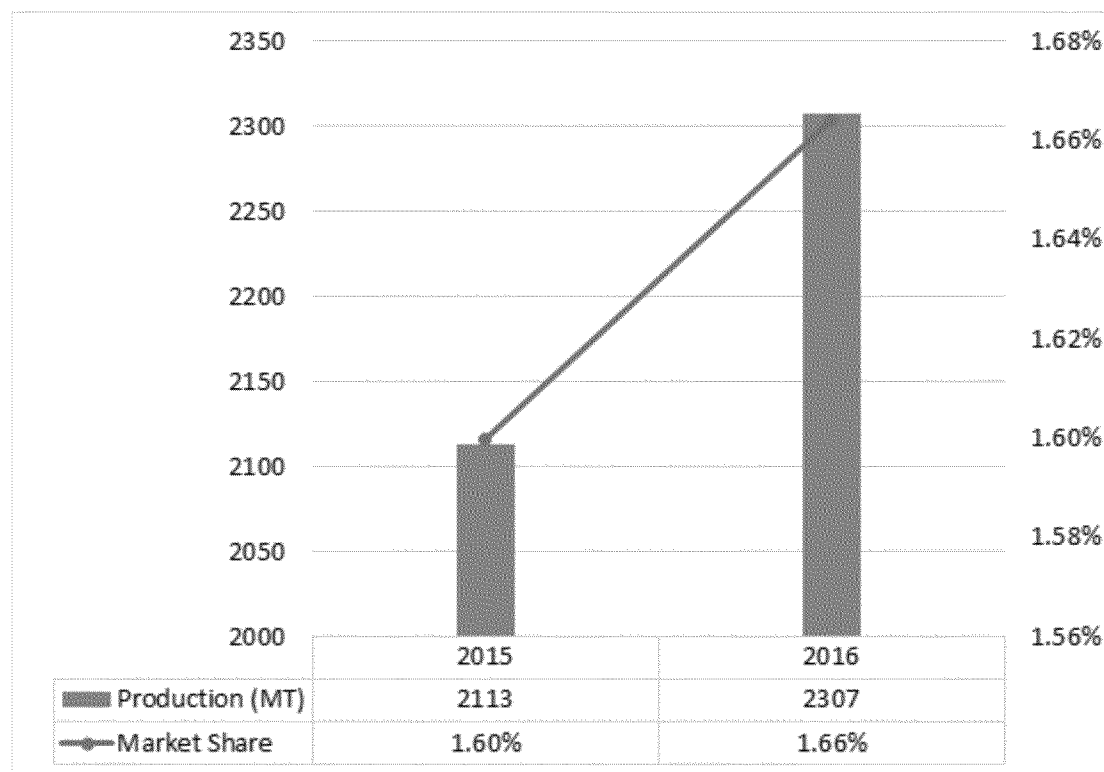
Source: Franmar Chemical; QYR Chemical & Material Research Center, Feb 2017

**Figure Franmar Chemical Paint Remover Production and Capacity (2015 and 2016)**



Source: Franmar Chemical; QYR Chemical & Material Research Center, Feb 2017

**Figure Franmar Chemical Paint Remover Production and Market Share (2015 and 2016)**



Source: Franmar Chemical; QYR Chemical & Material Research Center, Feb 2017

## 7.14.4 Contact Information

Mon - Thurs: 8:00am to 5:30pm CST

Fri: 8:00am to 5:00pm CST

E-mail: [custserv@franmar.com](mailto:custserv@franmar.com)

Tel: 1-800-538-5069

## 7.15 PPG (PPG Aerospace)

# PPG Aerospace

Bringing innovation to the surface.™

### 7.15.1 Company Basic Information

**Table PPG (PPG Aerospace Basic Information**


Item	Contents
------	----------

Name	PPG (PPG Aerospace)
Website	<a href="http://www.ppgaerospace.com/">http://www.ppgaerospace.com/</a>
Plant Location	US
Company Profile	PPG Aerospace provides an Innovative Platform Portfolio The PPG Aerospace portfolio is comprised of a unique group of products and services. Through a series of strategic acquisitions, PPG has assembled a team of industry leaders that builds on its own long history as a transparent aviation leader, with PRC -DeSoto International for sealants, coatings, and packaging and application systems; Sierracin/Sylmar Corp. for advanced composite transparencies; and Eldorado Chemicals for paint removal and cleaning. Through this exceptional team, PPG is able to deliver what is key to the aviation industry: innovation.
Key Products	DuraPrep®, Desolift 5269 Neutral Peroxide Paint RemoverEldorado CT-2400 Carbon Remover & Paint Remover , Eldorado PR -3400 Paint Remover, etc.
Key Sales Regions	US, EU, etc.
Business History	Since 1961

Source: PPG (PPG Aerospace), QYR Chemical & Material Research Center, Feb 2017

## 7.15.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
<p>DuraPrep®</p> 	<p>DuraPrep® Prep 240 is a low VOC, water -based paint remover that will effectively lift highly cross -linked urethane and epoxy topcoats and primers, alkyds and the toughest of industrial coatings and linings. This low odor product is capable of lifting fuel resistant primers, some inorganic primers and coal tar epoxies. Recommended for use in petrochemical plants, chemical tank farms, nuclear facilities and any area where worker safety or damage to delicate equipment may be a concern. Prep™ 240 contains no TAP's or HAP's, offers easy cleanup with soap and water or denatured alcohol.</p>

Source: PPG (PPG Aerospace), QYR Chemical & Material Research Center, Feb 2017

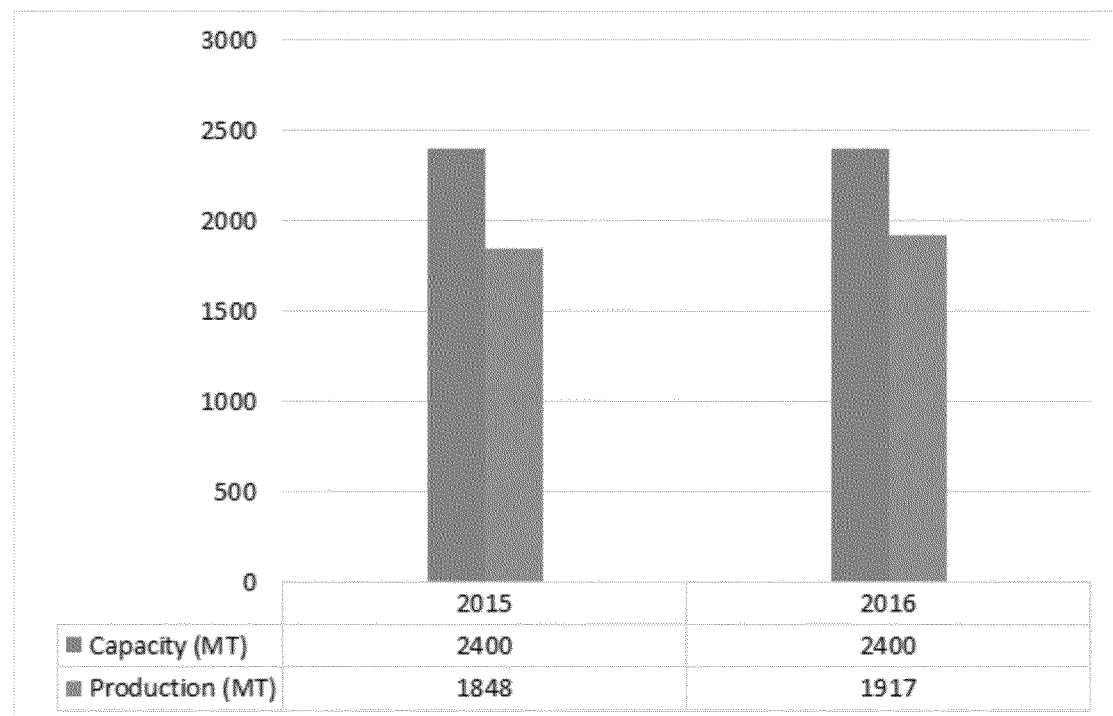
### 7.15.3 PPG (PPG Aerospace Paint Remover Capacity, Production, Revenue, Price and Gross Margin(2015 and 2016)

**Table PPG (PPG Aerospace Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	2400	2400
Production(MT)	1848	1917
Capacity Utilization Rate	77.00%	79.88%
Price(USD/MT)	6395	6367
Revenue(M USD)	11.82	12.21
Cost(USD/MT)	5044	5072
Gross(USD/MT)	1351	1295
Gross Margin	21.12%	20.34%

Source: PPG (PPG Aerospace; QYR Chemical & Material Research Center, Feb 2017

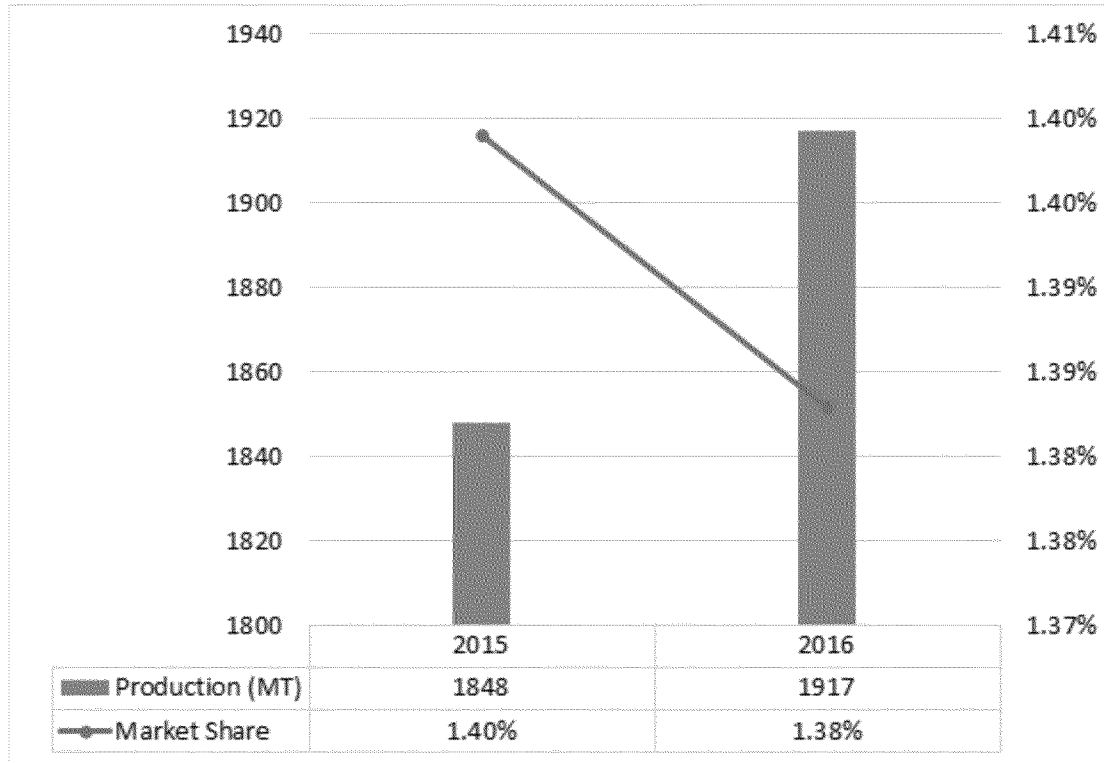
**Figure PPG (PPG Aerospace Paint Remover Production and Capacity (2015 and 2016)**



Source: PPG (PPG Aerospace; QYR Chemical & Material Research Center, Feb 2017



**Figure PPG (PPG Aerospace Paint Remover Production and Market Share (2015 and 2016))**



Source: PPG (PPG Aerospace, QYR Chemical & Material Research Center, Feb 2017)

### 7.15.4 Contact Information

PPG Aerospace Transparencies  
 1719 Highway 72 East  
 Huntsville, AL 35811 US  
 256-851-7001

### 7.16 United Gilsonite Labs



## 7.16.1 Company Basic Information

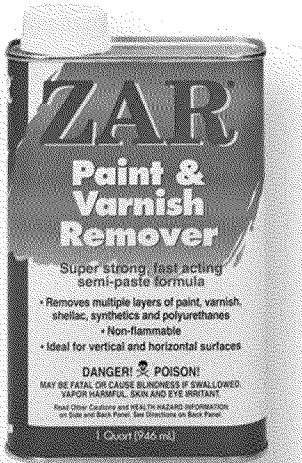
**Table United Gilsonite Labs Basic Information**

Item	Contents
Name	United Gilsonite Labs
Website	<a href="http://www.ugl.com/">http://www.ugl.com/</a>
Plant Location	US
Company Profile	United Gilsonite Laboratories manufactures over 80 paint specialty and home maintenance products which are sold nationally and internationally at hardware stores, home centers, paint stores and lumberyards. UGL has come a long way since 1932; meeting new and changing challenges and demands have kept us profitable along the way. By maintaining our emphasis on keeping with the latest technology and market trends we have been able to grow our product lines and uphold our quality.
Key Products	ZAR® PAINT AND VARNISH REMOVER
Key Sales Regions	US, EU, etc.
Business History	Since 1980s

Source: United Gilsonite Labs; QYR Chemical & Material Research Center, Feb 2017

## 7.16.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
	Fast acting, non-flammable
	Needs no solvents or neutralizers after removal
	Heavy consistency permits excellent cutting action on vertical and horizontal surfaces
	Harmless to wood, plaster, metal, glass and nylon or natural bristle brushes
	Will not stain or raise the grain of the wood
	Requires no water wash after removal

Source: United Gilsonite Labs; QYR Chemical & Material Research Center, Feb 2017

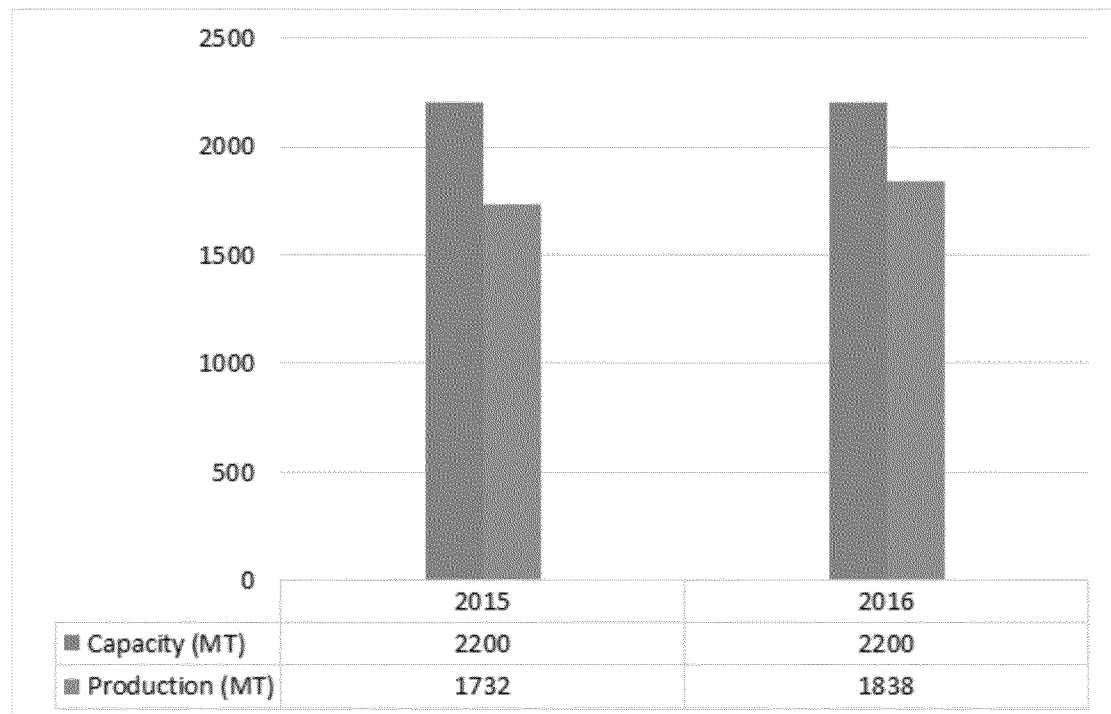
### 7.16.3 United Gilsonite Labs Paint Remover Capacity, Production, Revenue, Price and Gross Margin(2015 and 2016)

**Table United Gilsonite Labs Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	2200	2200
Production(MT)	1732	1838
Capacity Utilization Rate	78.73%	83.55%
Price(USD/MT)	11258	11220
Revenue(M USD)	19.50	20.62
Cost(USD/MT)	8830	8912
Gross(USD/MT)	2428	2308
Gross Margin	21.57%	20.57%

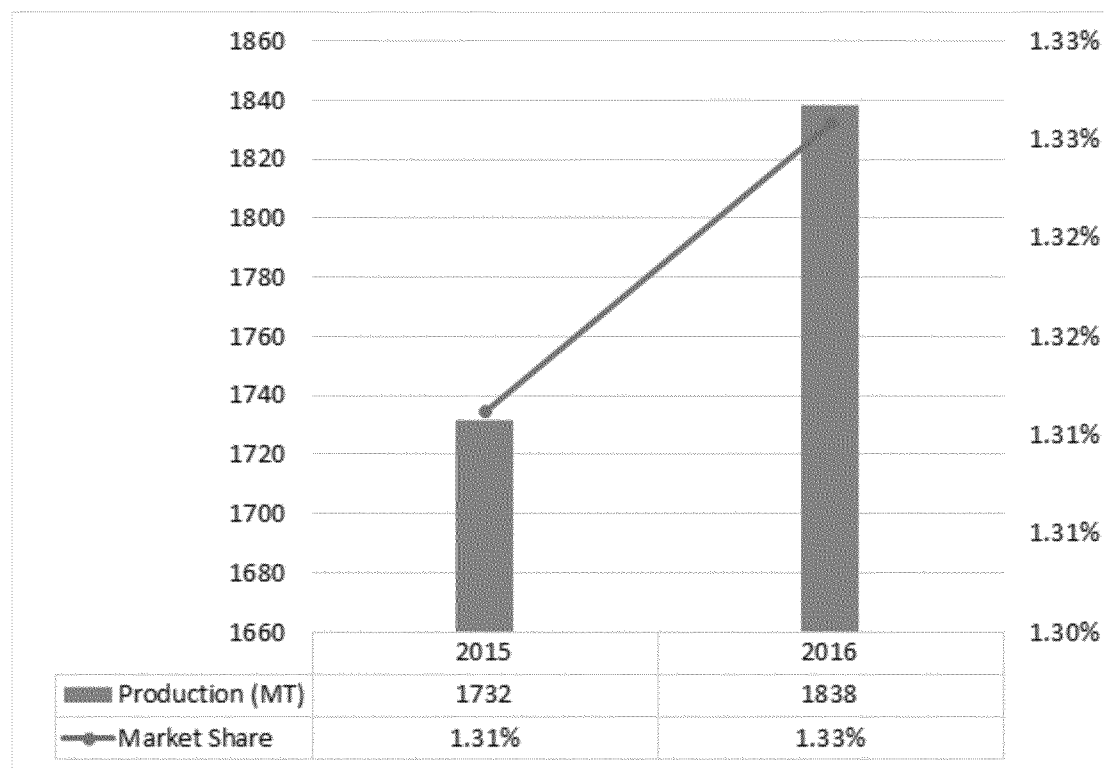
Source: United Gilsonite Labs; QYR Chemical & Material Research Center; Feb 2017

**Figure United Gilsonite Labs Paint Remover Production and Capacity (2015 and 2016)**



Source: United Gilsonite Labs; QYR Chemical & Material Research Center; Feb 2017

**Figure United Gilsonite Labs Paint Remover Production and Market Share (2015 and 2016)**



Source: United Gilsonite Labs; QYR Chemical & Material Research Center, Feb 2017

## 7.16.4 Contact Information

Tel: 800-UGL-LABS

Add: P.O. BOX 70 SCRANTON, PA 18501

## 7.17 Formby's



### 7.17.1 Company Basic Information

**Table Formby's Basic Information**


Item	Contents
Name	Formby's
Website	<a href="https://www.formbys.com/">https://www.formbys.com/</a>
Plant Location	US

Company Profile	For hundreds of years, enhancing the beauty of wood has been essential to the woodworker's craft. Let us show you how today's Formby's® products can help you achieve beautiful results you'll always be proud of.
Key Products	Formby's® Paint & Poly Remover
Key Sales Regions	US, EU, etc.
Business History	Since 1980s

Source: Formby's; QYR Chemical & Material Research Center; Feb 2017

## 7.17.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
	<p>Formby's® Paint &amp; Poly Remover is specially developed to lift multiple layers of paint and polyurethane from wood furniture without stripping away the wood's natural patina. Unlike many harsh all-purpose products or "safe" strippers, Formby's® Paint &amp; Poly Remover will not bleach wood's natural color or raise the grain. For best results, lay a thick coat of Paint &amp; Poly Remover on the surface, brushing in only one direction. Do not brush back &amp; forth. Use a plastic scraper rather than metal to prevent damaging the wood's surface.</p> <p>Always lift rather than wipe paint or polyurethane from wood surfaces using a plastic scraper. Lifting takes paint and polyurethane off of wood; wiping pushes the loosened paint and polyurethane back into the wood.</p>

Source: Formby's; QYR Chemical & Material Research Center; Feb 2017

## 7.17.3 Formby's Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

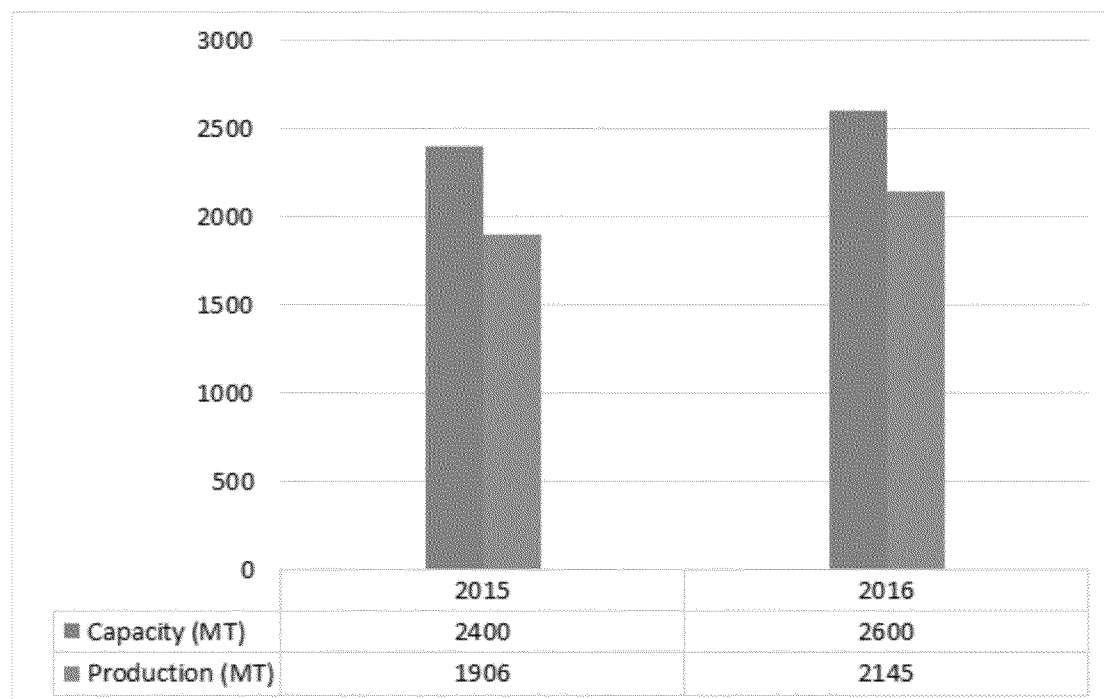
**Table Formby's Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	2400	2600
Production(MT)	1906	2145
Capacity Utilization Rate	79.42%	82.50%
Price(USD/MT)	13875	13852
Revenue(M USD)	26.45	29.71
Cost(USD/MT)	9750	10065
Gross(USD/MT)	4125	3787

Gross Margin	29.73%	27.34%
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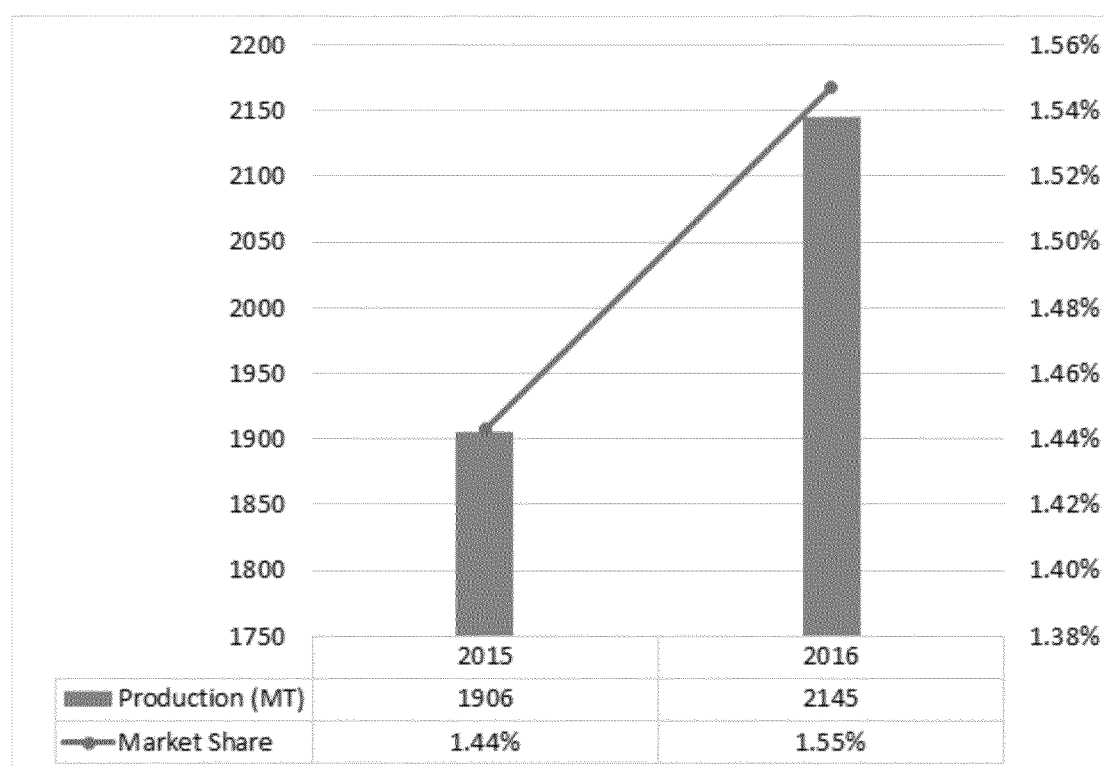
Source: Formby's; QYR Chemical & Material Research Center; Feb 2017

**Figure Formby's Paint Remover Production and Capacity (2015 and 2016)**



Source: Formby's; QYR Chemical & Material Research Center; Feb 2017

**Figure Formby's Paint Remover Production and Market Share (2015 and 2016)**



Source: Formby's; QYR Chemical & Material Research Center; Feb 2017

## 7.17.4 Contact Information

10 Mountainview Road  
Upper Saddle River, NJ 07458  
Phone: (800) 290-1105

## 7.18 GSP



### 7.18.1 Company Basic Information

**Table GSP Basic Information**

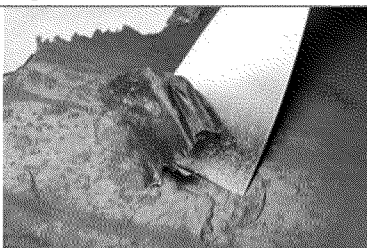
Item	Contents
Name	GSP
Website	<a href="http://gsp-usa-inc.com/">http://gsp-usa-inc.com/</a>
Plant Location	US
Company Profile	<p>Manufactured in the US, Global Specialty Products– USA, Inc.</p> <p>Featuring:</p> <ul style="list-style-type: none"> <li>Superior formulation – one cleaner for all shop applications (lowers inventory costs)</li> <li>Non-hazardous, non-HAPs – no SARA 313 &amp; WHMIS reporting</li> <li>Non-ozone depleting chemicals – environmentally safe</li> <li>Zero VOC (aqueous-based) – no VOC permits required</li> <li>Low rate of evaporation (solvent -based) – use the product over &amp; over again</li> <li>Non-toxic (aqueous-based) – no special safety, handling and storage</li> <li>Low order of toxicity (solvent-based) – minimizes EPA reporting</li> <li>Non-carcinogenic, non-mutagenic, non-teratogenic</li> <li>Non-flammable – safer worker environment (lowers insurance premium)</li> <li>No harmful fumes – worker friendly</li> <li>Mild odor – user friendly</li> <li>Biodegradable, low BOD / COD (aqueous-based) – easy disposal</li> <li>Non-emulsifying degreasers (oil splitting properties, result in longer bath life)</li> <li>Low foaming – suitable for use in high pressure spray, as well as, immersion with ultrasonic cleaning equipment</li> </ul>

	Recyclable solvent-based (recoverable through vacuum distillation)- save money and reduce your waste disposal and save the environment Compatible and non-corrosive on various metals
Key Products	BOND BREAKER™ – 2000 Graffiti Remover, AERO SAFE™ – 2000 Paint Stripper, D-BOND HTS™ Hot Tank Stripper , AIR O FLEX™ – AirCraft Paint Stripper , NATURE’S GUARD™ – Soy-Based Paint Stripper, GP 2000™– Coating Remover, etc.
Key Sales Regions	US, EU, etc.
Business History	Since 1980s

Source: GSP; QYR Chemical & Material Research Center; Feb 2017

## 7.18.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

	Figure
HOT TANK STRIPPER	

Source: GSP; QYR Chemical & Material Research Center; Feb 2017

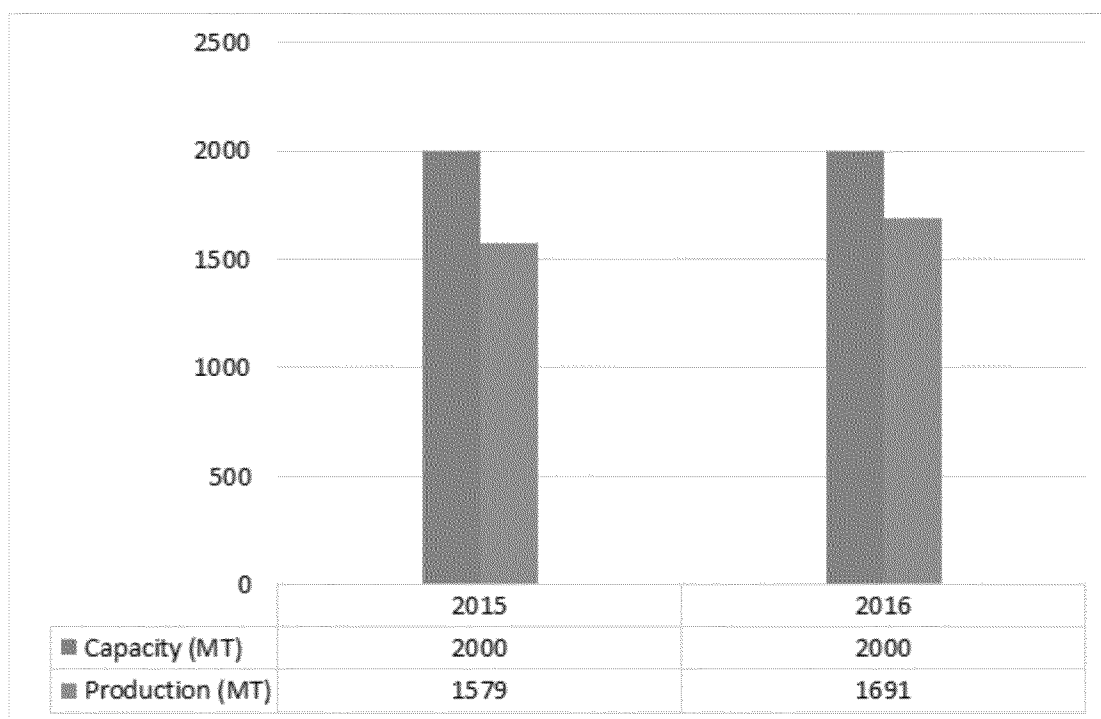
## 7.18.3 GSP Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

**Table GSP Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

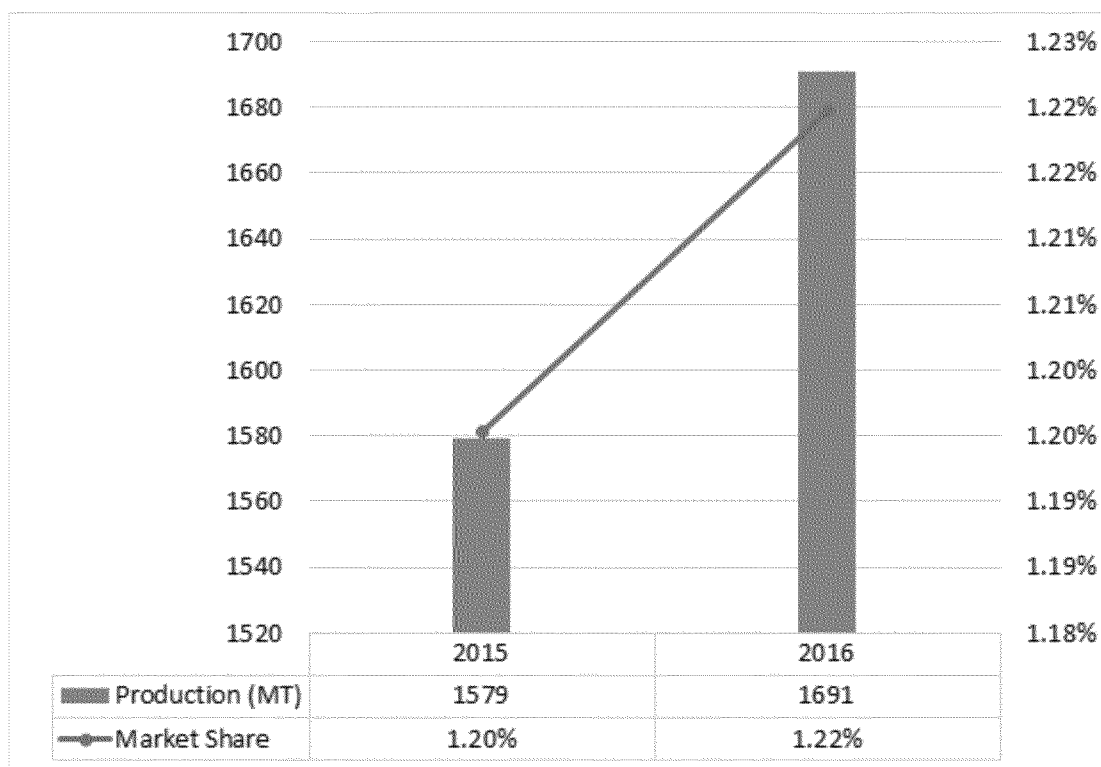
	2015	2016
Capacity(MT)	2000	2000
Production(MT)	1579	1691
Capacity Utilization Rate	78.95%	84.55%
Price(USD/MT)	10020	9884
Revenue(M USD)	15.82	16.71
Cost(USD/MT)	7553	7800
Gross(USD/MT)	2467	2084
Gross Margin	24.62%	21.08%

Source: GSP; QYR Chemical & Material Research Center; Feb 2017



**Figure GSP Paint Remover Production and Capacity (2015 and 2016)**

Source: GSP; QYR Chemical &amp; Material Research Center, Feb 2017

**Figure GSP Paint Remover Production and Market Share (2015 and 2016)**

Source: GSP; QYR Chemical &amp; Material Research Center, Feb 2017

## 7.18.4 Contact Information

10 Eagle Avenue

Suite 500

Mt. Holly, NJ 08060

Office Hours: M-F, 8:00 am to 5:00 pm EST

Phone: 609-518-7577

Fax: 609-518-5277

## 7.19 Certilab



### 7.19.1 Company Basic Information

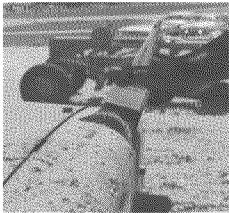
**Table Certilab Basic Information**

Item	Contents
Name	Certilab
Website	<a href="http://www.certilab.com.au/">http://www.certilab.com.au/</a>
Plant Location	Australia, US
Company Profile	<p>With great people, exciting products and outstanding service, the Certilabs Team have the right solutions for your industrial maintenance needs!</p> <p>Certilabs is a division of NCH Corporation, a maintenance, repair and supply business that operates in over 50 countries in North, Central and South America, Europe, Asia and Australia. Across the globe and around the clock, businesses rely on NCH and its 10,000 associates to keep their operations running smoothly and their clients satisfied.</p> <p>Certilabs is a major manufacturer and supplier of industrial maintenance products to businesses worldwide. Operating in Australia since 1968, Certilabs has been, and will continue to be a supplier of choice because of experienced field sales representatives, the latest and most effective products on the market and for value-added services that distinguish Certilabs in the marketplace.</p>
Key Products	CERTISTRIP™ Paint Remover
Key Sales Regions	Australia, US, etc.
Business History	Since 1919

Source: Certilab; QYR Chemical & Material Research Center; Feb 2017

## 7.19.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
CERTISTRIP <sup>TM</sup> 	<p>Deep penetrating action cuts quickly into heavily painted surfaces.</p> <p>Removes tough industrial finishes, including paints, coatings, decals, adhesives, vinyl, Scotch lite <sup>®</sup> sheeting and more.</p> <p>Will not harm steel, aluminium, brick or concrete surfaces.</p> <p>Use indoors and out – works best at temperatures above 12 ° C.</p> <p>Easy application with brush, mop or spray – requires no mixing or measuring, which reduces labour time and maintenance costs.</p>

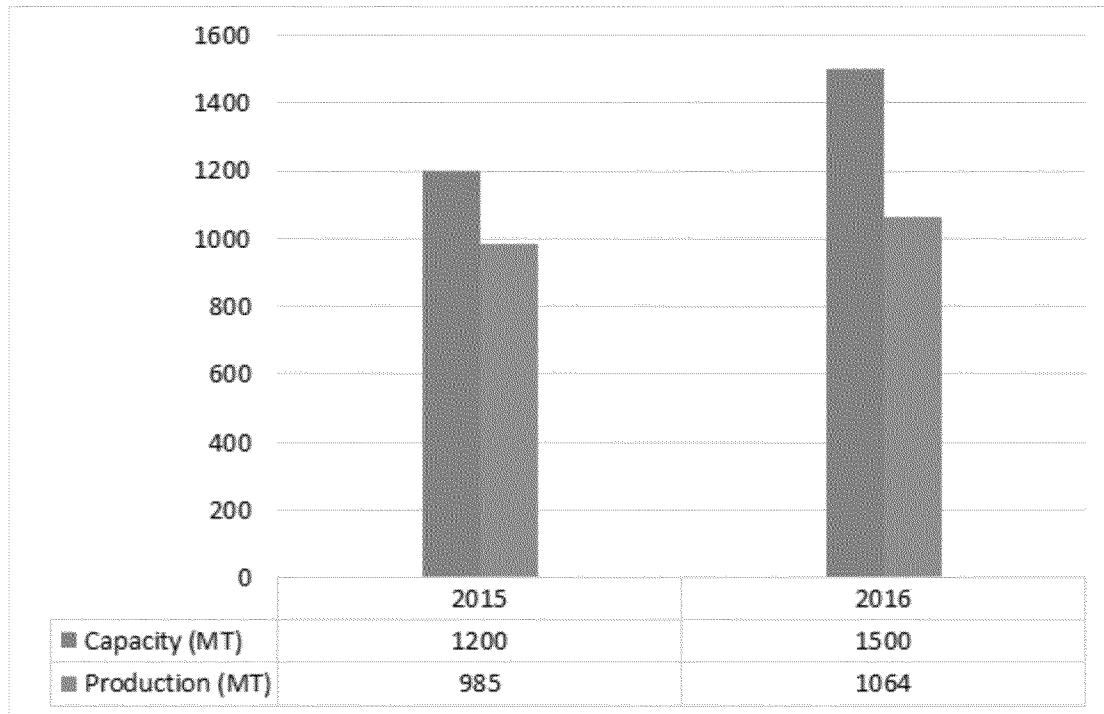
Source: Certilab; QYR Chemical & Material Research Center; Feb 2017

## 7.19.3 Certilab Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

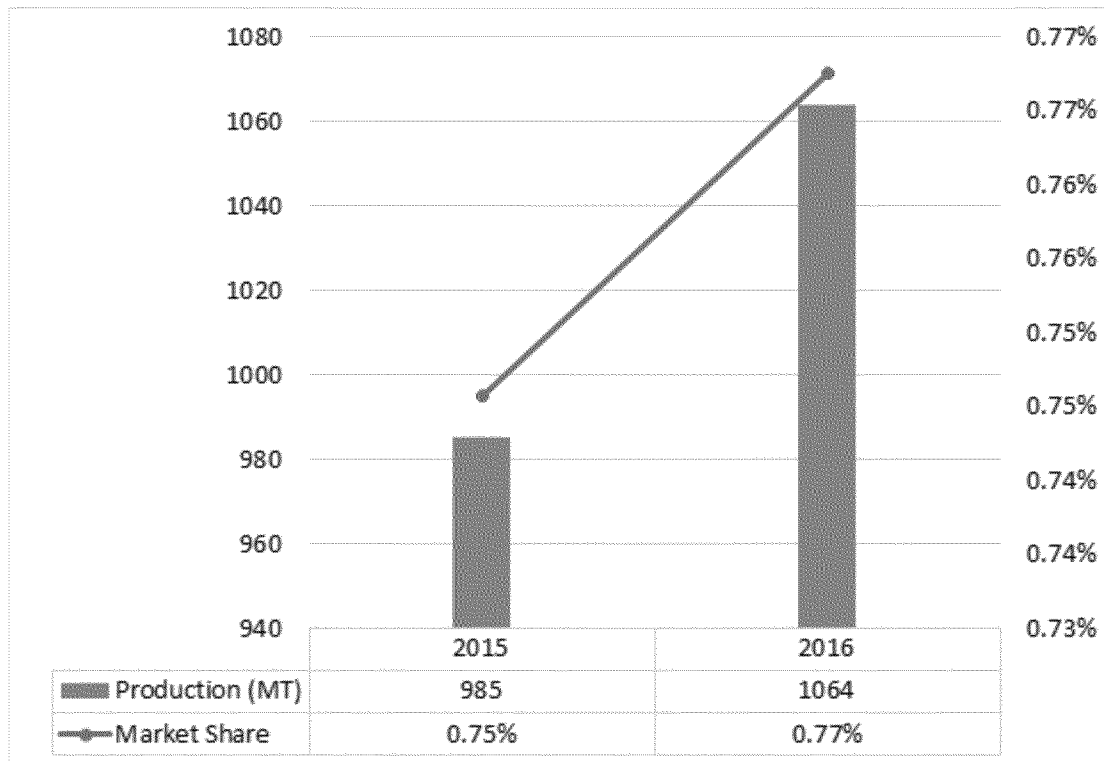
**Table Certilab Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	1200	1500
Production(MT)	985	1064
Capacity Utilization Rate	82.08%	70.93%
Price(USD/MT)	10200	10156
Revenue(M USD)	10.05	10.81
Cost(USD/MT)	7825	7929
Gross(USD/MT)	2375	2227
Gross Margin	23.28%	21.93%

Source: Certilab; QYR Chemical & Material Research Center; Feb 2017

**Figure Certilab Paint Remover Production and Capacity (2015 and 2016)**

Source: Certilab; QYR Chemical & Material Research Center; Feb 2017

**Figure Certilab Paint Remover Production and Market Share (2015 and 2016)**

Source: Certilab; QYR Chemical & Material Research Center; Feb 2017

## 7.19.4 Contact Information

Mail correspondence to Certilabs  
 5-9 Ralph Street, Alexandria, NSW 2015  
 PO Box 5068, Alexandria, NSW, 2015  
 Fax to (02) 9693 1562

## 7.20 Cirrus



### 7.20.1 Company Basic Information

**Table Cirrus Basic Information**

Item	Contents
Name	Cirrus
Website	<a href="http://www.cirrus-systems.co.uk/">http://www.cirrus-systems.co.uk/</a>
Plant Location	UK
Company Profile	Welcome to Cirrus Systems – we are suppliers of safe, effective and eco-friendly solutions for removing industrial and domestic paints, varnish, lacquers, powder and other coatings. All of our chemical paint stripper products are non-hazardous, non-toxic, 100% biodegradable and do not burn skin. We supply direct to professional, industrial and DIY users.
Key Products	Socostrip A0212, RemovAll Eco-Friendly Paint Strippers
Key Sales Regions	US, EU, etc.
Business History	Since 1980s

Source: Cirrus; QYR Chemical & Material Research Center, Feb 2017

### 7.20.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
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RemovAll



Being 100% biodegradable, RemovAll paint stripper does not add to the waste stream or impact the environment. It is therefore very much the GREEN option when it comes to coating removal. In addition, as an inherently safe stripper, RemovAll can be used to reduce or eliminate the risks associated with the removal of hazardous coatings. As an example, lead-based paints are still widely found in older houses, offices and industrial premises.

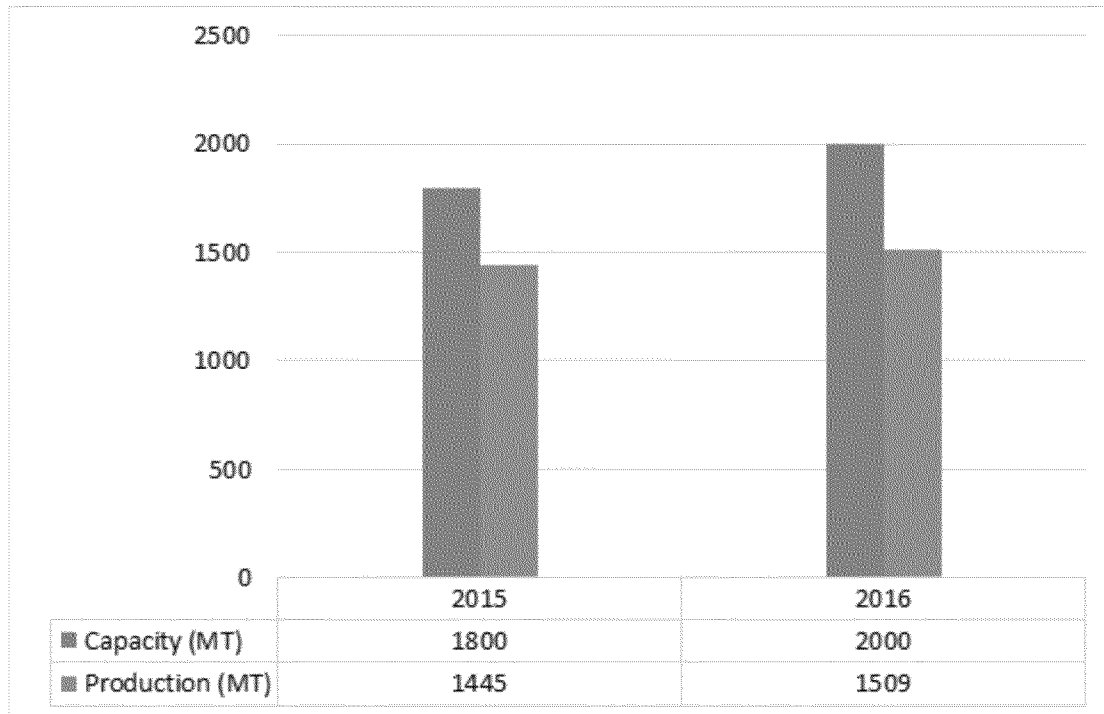
Source: Cirrus; QYR Chemical & Material Research Center; Feb 2017

### 7.20.3 Cirrus Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

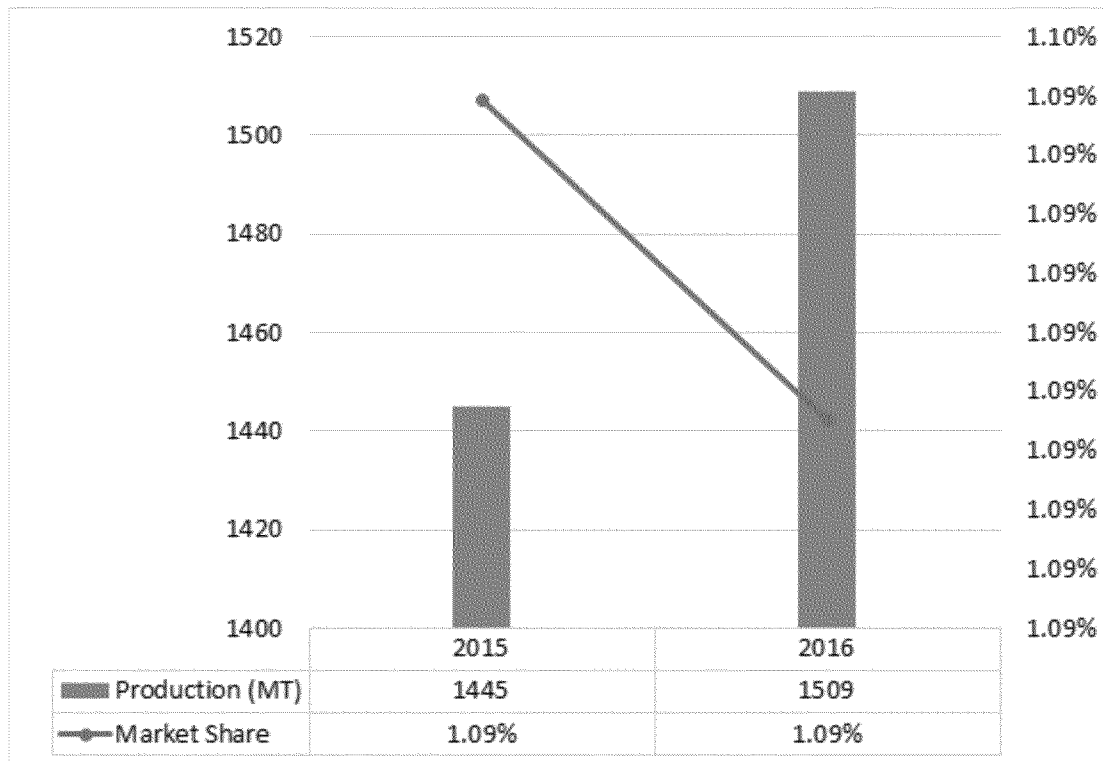
**Table Cirrus Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	1800	2000
Production(MT)	1445	1509
Capacity Utilization Rate	80.28%	75.45%
Price(USD/MT)	10366	10341
Revenue(M USD)	14.98	15.60
Cost(USD/MT)	7507	7726
Gross(USD/MT)	2859	2615
Gross Margin	27.58%	25.29%

Source: Cirrus; QYR Chemical & Material Research Center; Feb 2017

**Figure Cirrus Paint Remover Production and Capacity (2015 and 2016)**

Source: Cirrus; QYR Chemical & Material Research Center, Feb 2017

**Figure Cirrus Paint Remover Production and Market Share (2015 and 2016)**

Source: Cirrus; QYR Chemical & Material Research Center, Feb 2017

## 7.20.4 Contact Information

Unit 12, 8 Haviland Road,  
Ferndown Industrial Estate, Wimborne, Dorset  
BH21 7RF, United Kingdom  
Tel: 01202 892111

## 7.21 ITW Dymon



### 7.21.1 Company Basic Information

**Table ITW Dymon Basic Information**

Item	Contents
Name	ITW Dymon
Website	<a href="http://itwprofessionalbrands.com/">http://itwprofessionalbrands.com/</a>
Plant Location	US
Company Profile	<p>ITW Dymon is a world leader in manufacturing diverse lines of industrial MRO specialty chemicals and marking systems. Some of our most popular products include; hand cleaner towels, SCRUBS in -a-Bucket®, layout fluids, DYKEM® Steel Blue®, and markers, Texpen® and Dalo®. We are headquartered in Olathe, KS.</p> <p>Illinois Tool Works (ITW) is a multinational Fortune 200 company based in Glenview, IL that has over 750 decentralized operating units with 55,000 employees. Through years of research, development and acquisitions, ITW is now one of the largest manufacturers of marking systems and specialty MRO chemicals with a combined experience spanning 80 years. ITW Dymon is a supplier to the industrial, manufacturing, utility and construction markets. Being under the umbrella of ITW, Dymon has been able to benefit from the ITW Technology Center; its world presence in over 49 countries and its diversification of products and services.</p>
Key Products	Graffiti & Spray Paint Remover, etc.
Key Sales Regions	US, EU, etc.
Business History	DYKEM® began its existence in 1920 when Steel Blue® Layout Fluid was formulated. It is still the #1 recognized and used layout fluid in the industry. Over the years, Dykem® expanded its line with DYKEM®




Staining Colors, Thinner &amp; Remover and Mark &amp; Code pens.

Source: ITW Dymon; QYR Chemical &amp; Material Research Center; Feb 2017

## 7.21.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
Graffiti & Spray 	Graffiti & Spray Paint Remover jelled formula is a high quality graffiti remover that will not run off vertical surfaces. This product stays on the surface long enough to emulsify and work harder to remove paint and graffiti without extra clean up. Removes paint, lipstick, grease, ball point ink and crayons from a variety of surfaces. Safe for cleaning metal, porcelain, formica and baked enamel paints. Jelled aerosol formula will not drip or run.

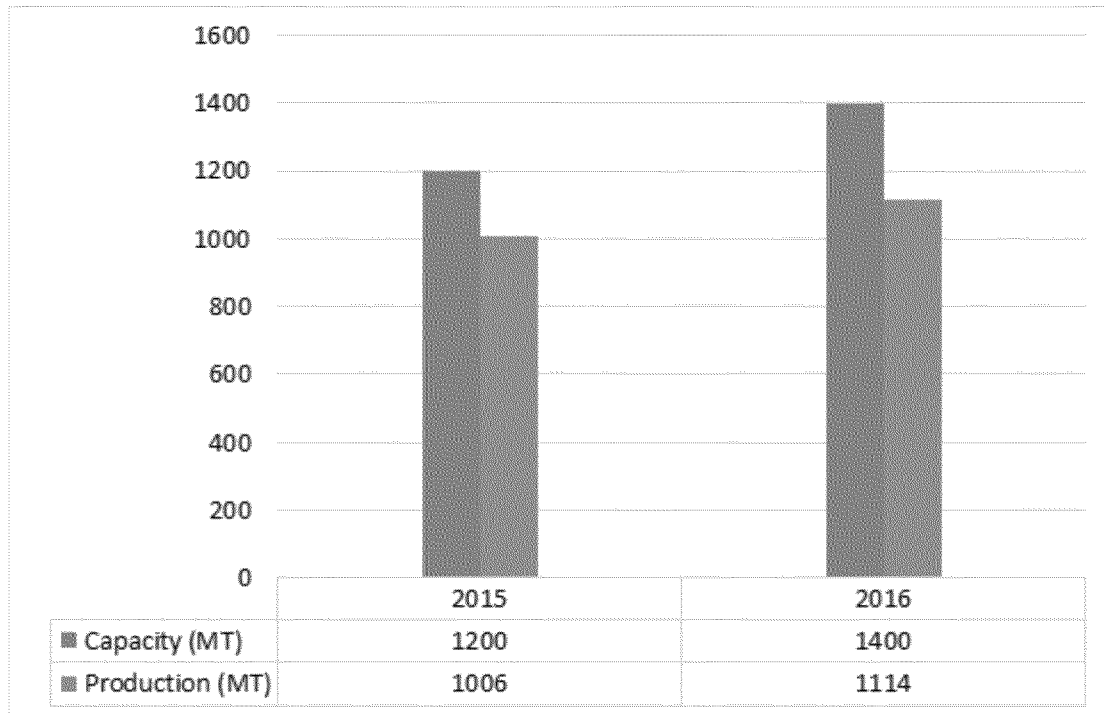
Source: ITW Dymon; QYR Chemical &amp; Material Research Center, Feb 2017

## 7.21.3 ITW Dymon Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

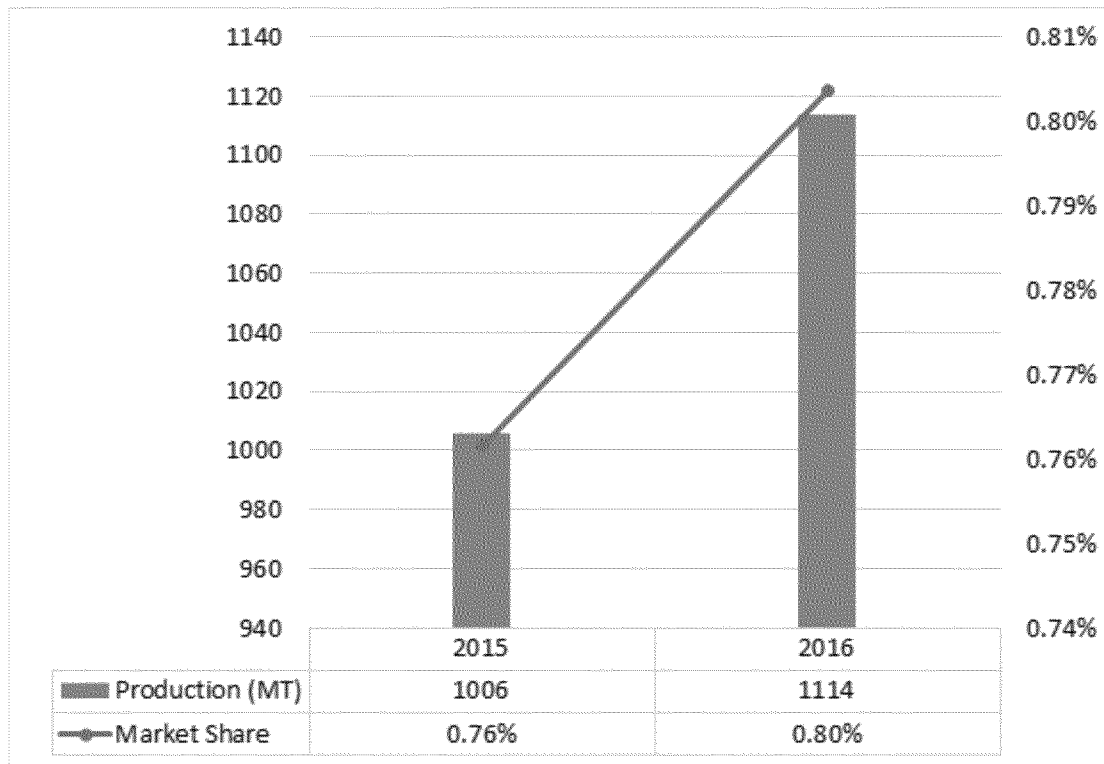
**Table ITW Dymon Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	1200	1400
Production(MT)	1006	1114
Capacity Utilization Rate	83.83%	79.57%
Price(USD/MT)	15548	15524
Revenue(M USD)	15.64	17.29
Cost(USD/MT)	10615	10811
Gross(USD/MT)	4933	4713
Gross Margin	31.73%	30.36%

Source: ITW Dymon; QYR Chemical &amp; Material Research Center; Feb 2017

**Figure ITW Dymon Paint Remover Production and Capacity (2015 and 2016)**

Source: ITW Dymon; QYR Chemical & Material Research Center, Feb 2017

**Figure ITW Dymon Paint Remover Production and Market Share (2015 and 2016)**

Source: ITW Dymon; QYR Chemical & Material Research Center, Feb 2017

## 7.21.4 Contact Information

805 E. Old 56 Highway  
 Olathe, Kansas 66061, US  
 Tel: 800.443.9536  
 913.829.6296  
 Fax: 800.323.9536  
 913.397.8707

## 7.22 Rust-Oleum



### 7.22.1 Company Basic Information

**Table Rust-Oleum Basic Information**

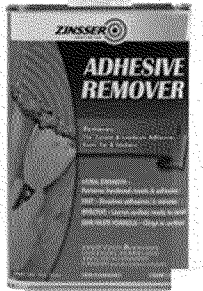
Item	Contents
Name	Rust-Oleum
Website	<a href="http://www.rustoleum.com/">http://www.rustoleum.com/</a>
Plant Location	US
Company Profile	<p>Solving challenges is the very foundation of who we are. After all, in the beginning, our founder, sea captain Robert Fergusson, didn't particularly care about paint. He just wanted to keep his ship intact. That's why, when he noticed that an accidental splash of fish oil had stopped the relentless spread of corrosion on his rusty metal deck, he immediately recognized it for what it was: A valuable solution.</p> <p>The same passion that drove the Captain to spend his next few years creating the world's first rustpreventative paint still drives us today. When we see a problem, we work diligently until we've perfect ed a solution—which has led to some of the most cutting -edge, durable and innovative products in the industry.</p> <p>If you've got a surface you need to protect or a look you want to transform you've come to the right place. We have a coating for every challenge.</p> <p>Welcome to Rust -Oleum, home of trusted quality —and powerful solutions—since 1921.</p>
Key Products	ZINSSER® Paint & Varnish Stripper, ZINSSER® Magic Strip® Paint & Varnish Remover, etc.
Key Sales Regions	US, EU, etc.

Business History Since 1921

Source: Rust-Oleum; QYR Chemical & Material Research Center, Feb 2017

## 7.22.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
Adhesive Remover 	Extra strength. Removes hardened mastic & adhesives Fast. Dissolves adhesives in minutes Effective. Leaves surface ready to re-coat! All-purpose. Takes off adhesive, gum, tar & stickers

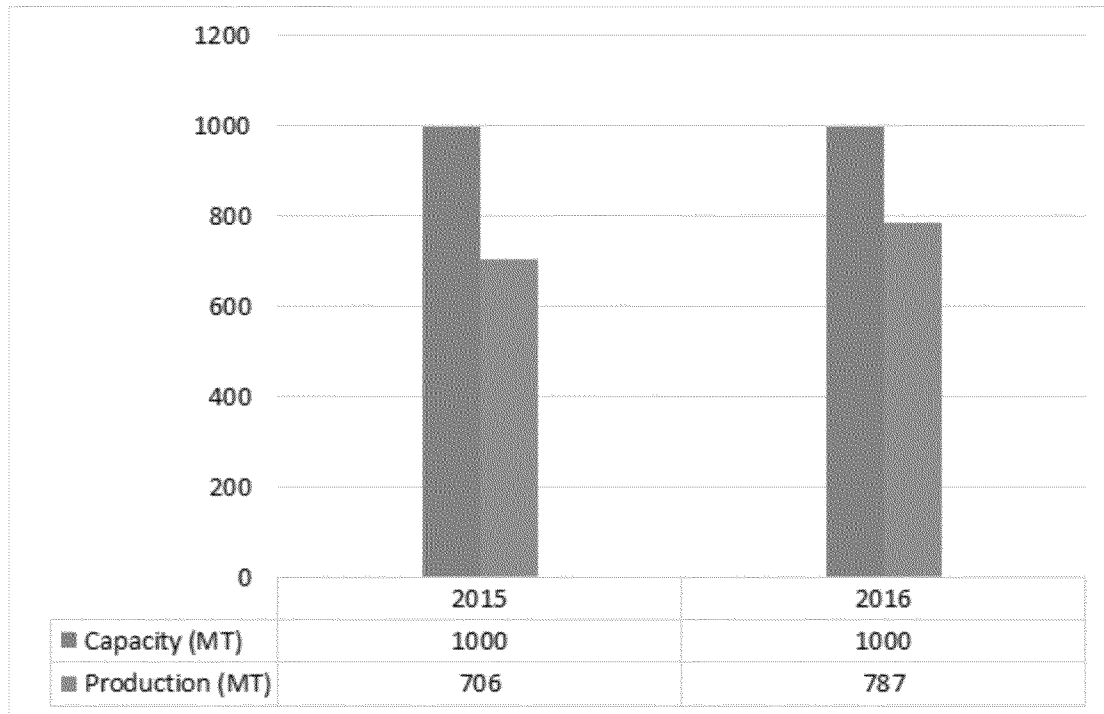
Source: Rust-Oleum; QYR Chemical & Material Research Center, Feb 2017

## 7.22.3 Rust-Oleum Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

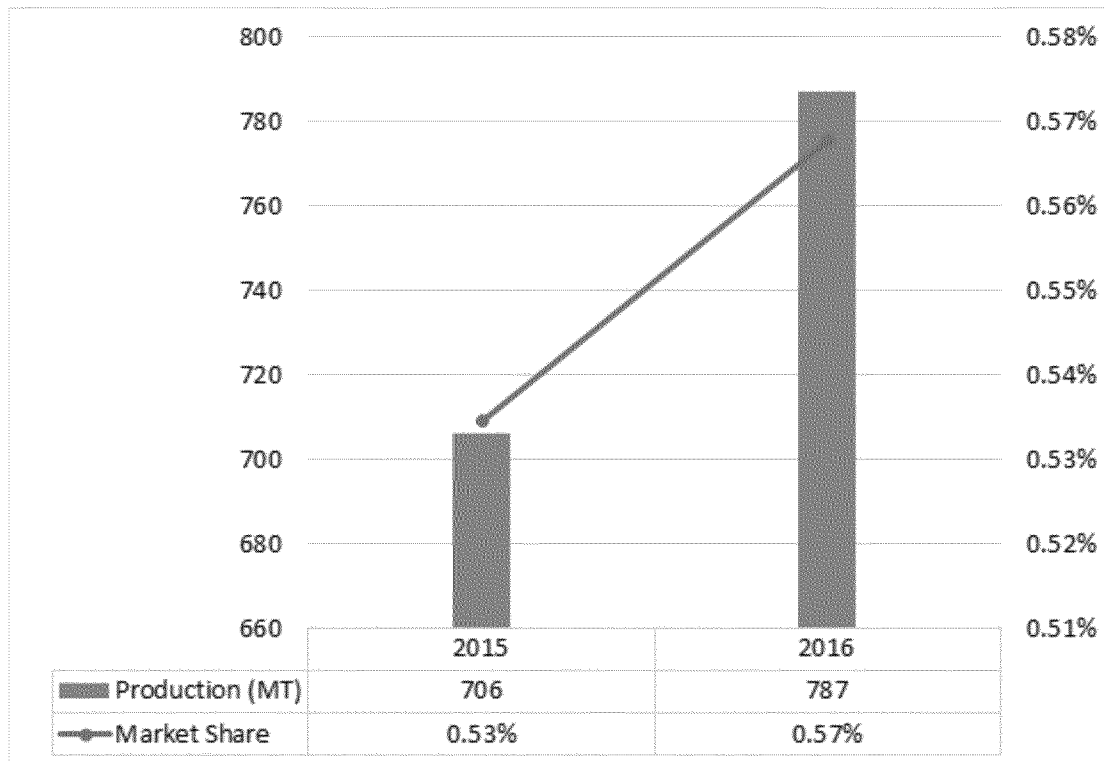
**Table Rust-Oleum Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	1000	1000
Production(MT)	706	787
Capacity Utilization Rate	70.60%	78.70%
Price(USD/MT)	22745	22760
Revenue(M USD)	16.06	17.91
Cost(USD/MT)	14868	15324
Gross(USD/MT)	7877	7436
Gross Margin	34.63%	32.67%

Source: Rust-Oleum; QYR Chemical & Material Research Center, Feb 2017

**Figure Rust-Oleum Paint Remover Production and Capacity (2015 and 2016)**

Source: Rust-Oleum; QYR Chemical & Material Research Center, Feb 2017

**Figure Rust-Oleum Paint Remover Production and Market Share (2015 and 2016)**

Source: Rust-Oleum; QYR Chemical & Material Research Center, Feb 2017

## 7.22.4 Contact Information

Product Support - General

Tel: (877) 385-8155

## 7.23 EcoProCote



### 7.23.1 Company Basic Information

**Table EcoProCote Basic Information**

Item	Contents
Name	EcoProCote
Website	<a href="http://www.ecoprocode.com/">http://www.ecoprocode.com/</a>
Plant Location	US
Company Profile	<p>Eco Safety, Inc., d.b.a. Eco Safety Products is a privately held SBE, MBI specialty chemicals and coatings manufacturing and distribution company based in Phoenix, Arizona. We began operations in February 2004, founded by current President, John Bennett and is supported by a dedicated team of professionals working diligently to enable our technology innovations to be enjoyed around the globe.</p> <p>Eco Safety Products is the first and only specialty coatings manufacturer that incorporates renewably sourced ingredients in every product we manufacture. We are dedicated to advanced sustainable coating innovations that achieve sustainability, value and performance. These three attributes drives our technology, development and supply chain methodology. We will only develop and market the best available chemical technologies that replace toxic ingredients and will meet or exceed the ongoing stringent standards of air quality, performance, and green building certification criteria. This is what sets us apart as a leader in sustainable coating innovations.</p> <p>Value is saving time, reducing waste, saving money, and having the best overall experience possible. The perceived notion is that all "green" products costs more and don't work as well. Well, we're changing this misconception. Our ability to achieve true value is a game changer in the industry. Most of our coating products achieves up to 2 times the spread</p>


rate making our products the lowest cost per square foot in its class. Performance is the ability to be flexible in field applications, increasing substrate life, and having longer product life, thus reducing the number of recoats over the life of the substrate. We believe by reducing installation stress and toxic effects of offgassing, the quality of workmanship also improves significantly. This ties into our sustainability requirement as well. Our advanced chemical innovations work as well and even better than competitive products in its class.

Key Products	Eco-Fast™, etc.
Key Sales Regions	US, EU, etc.
Business History	Since 2004

Source: EcoProCote; QYR Chemical & Material Research Center; Feb 2017

## 7.23.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
Eco-Fast™ 	Eco-Fast™ is available in a liquid version. They are a safe alternative to Methylene Chloride, Mineral Spirits, MEK, Naptha, NMP, Toluene, D'Limonene, etc. Unlike other competitive products, EcoFast has a neutral pH to work safely on a broader range of substrates such as concrete, masonry, wood, metal and most plastics. EcoFast works faster by penetrating through the coating to delaminate or break the bond rather than dissolving the coating. This delamination process is not only safer to use on various substrate materials, it allows easier and more efficient residue cleaning which is imperative if applying a new coating system.

Source: EcoProCote; QYR Chemical & Material Research Center; Feb 2017

## 7.23.3 EcoProCote Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

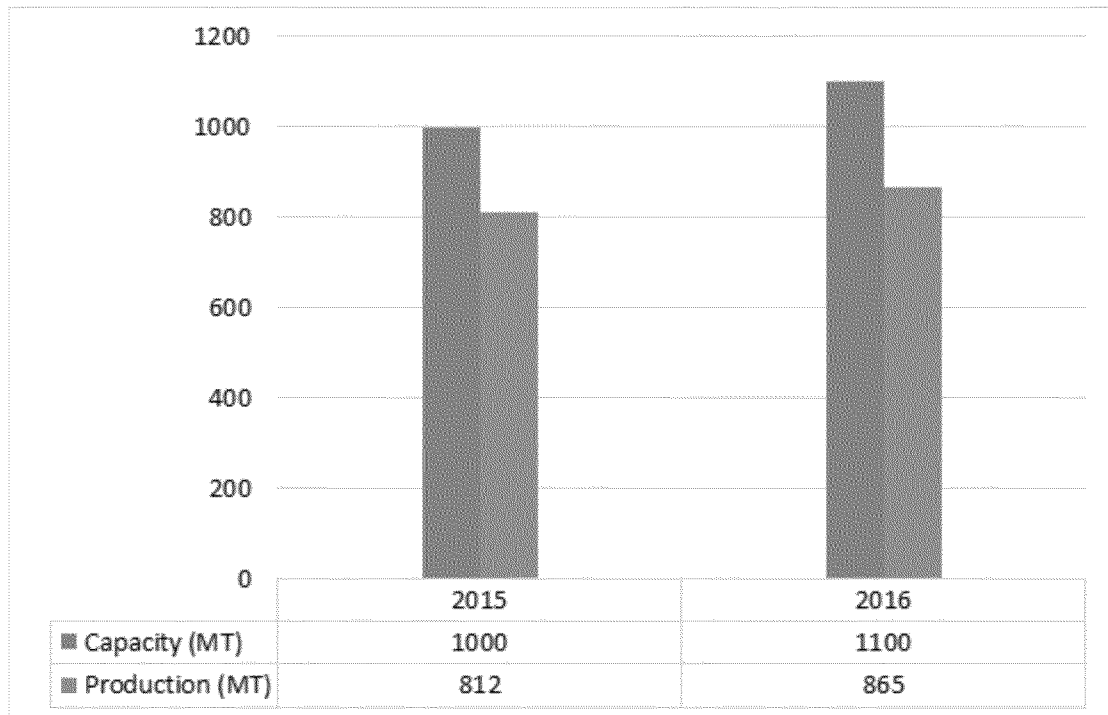
**Table EcoProCote Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	1000	1100
Production(MT)	812	865

Capacity Utilization Rate	81.20%	78.64%
Price(USD/MT)	5941	5916
Revenue(M USD)	4.82	5.12
Cost(USD/MT)	4696	4762
Gross(USD/MT)	1245	1154
Gross Margin	20.96%	19.50%

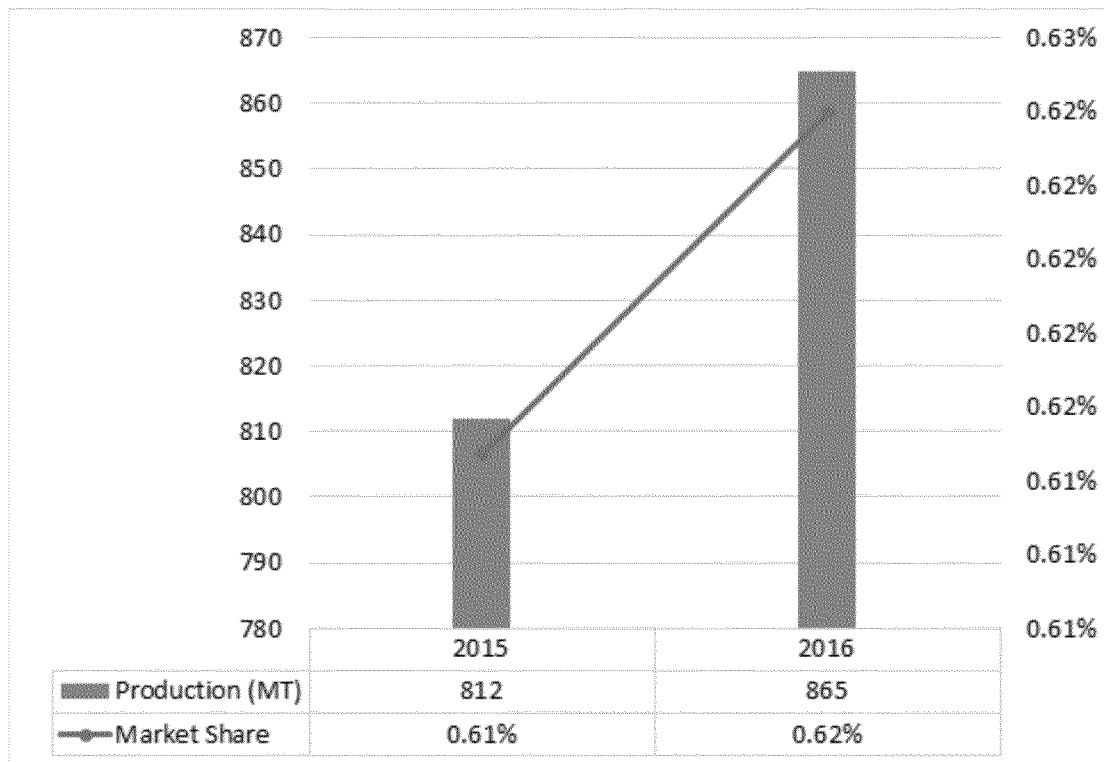
Source: EcoProCote; QYR Chemical & Material Research Center, Feb 2017

**Figure EcoProCote Paint Remover Production and Capacity (2015 and 2016)**



Source: EcoProCote; QYR Chemical & Material Research Center, Feb 2017



**Figure EcoProCote Paint Remover Production and Market Share (2015 and 2016)**

Source: EcoProCote; QYR Chemical & Material Research Center; Feb 2017

### 7.23.4 Contact Information

2921 W. Culver St., #4B Phoenix, AZ 85009  
Tel: 602 305-9397

### 7.24 EZ Strip



## 7.24.1 Company Basic Information


**Table EZ Strip Basic Information**

Item	Contents
Name	EZ Strip
Website	<a href="http://www.ezstrip.ca/">http://www.ezstrip.ca/</a>
Plant Location	US, UK
Company Profile	<p>EZ Strip's mission is to provide safe alternatives to hazardous solvents used for stripping, cleaning, and surface preparation using the most advanced, patented, water based technology. We are also interested in educating consumers, trade and industry about hazardous solvents, and how to use safer, effective alternatives.</p> <p>EZ Strip™ has been involved in the industrial paint stripping business since 1972 and until 1998 the main paint strippers and cleaners on the market were extremely toxic, carcinogenic, and hazardous for consumer health. This made Do It Yourself and even Professional projects difficult to do without exposing yourself to harmful fumes and toxins. In 1998 Eco Solutions our UK parent company which had prior to this time used common hazardous stripping chemicals developed a safe alternative formula for industrial paint stripping. EZ Strip™ has brought this innovative formula to North America and will continue to provide safe and effective alternatives to hazardous stripping chemicals and meet the needs of North Americans everywhere.</p>
Key Products	EZ Strip™ Paint & Varnish Stripper
Key Sales Regions	US, EU, etc.
Business History	Since 1972

Source: EZ Strip; QYR Chemical & Material Research Center; Feb 2017

## 7.24.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
EZ Strip™ 	<p>EZ Strip™ Professional Strength Paint and Varnish Stripper remove interior and exterior paints and varnishes from various surfaces. Safely remove paints and varnishes without damage to the surface being stripped. EZ Strip products are water based, skin safe, and fume free. Perfect for use by Professionals, DIYers, and Consumers.</p> <p>Coverage for EZ Strip™ Professional Strength Paint and Varnish Stripper is approximately 30 – 50 square feet per</p>

quart/litre.

Source: EZ Strip; QYR Chemical &amp; Material Research Center, Feb 2017

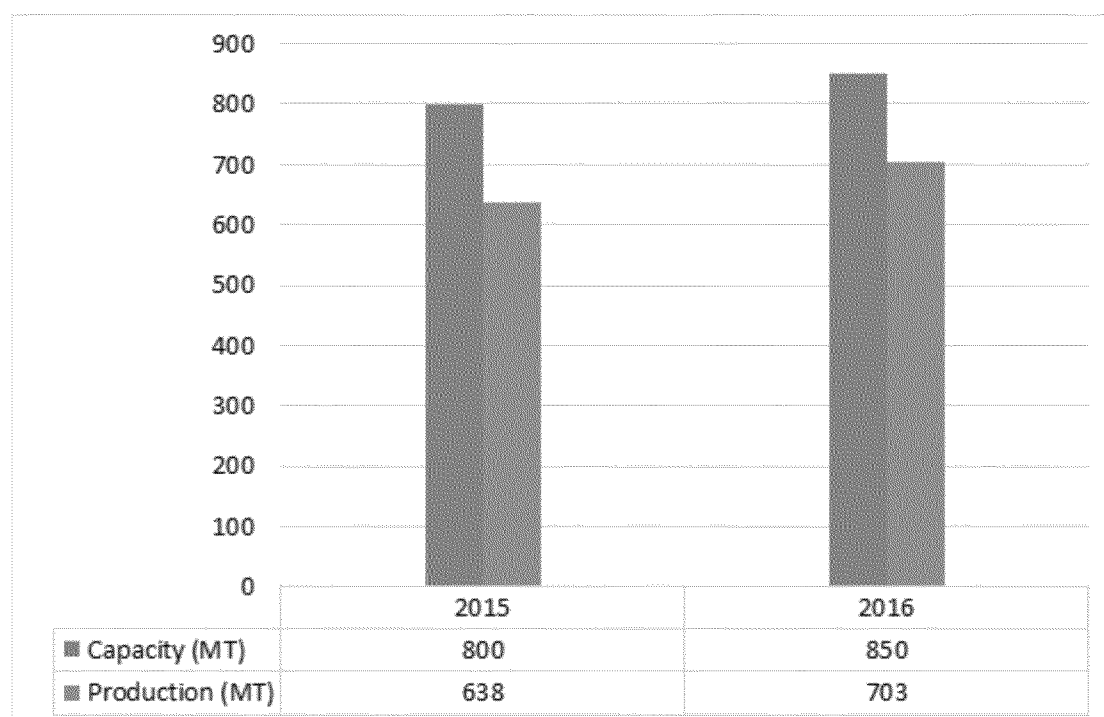
### 7.24.3 EZ Strip Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

**Table EZ Strip Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

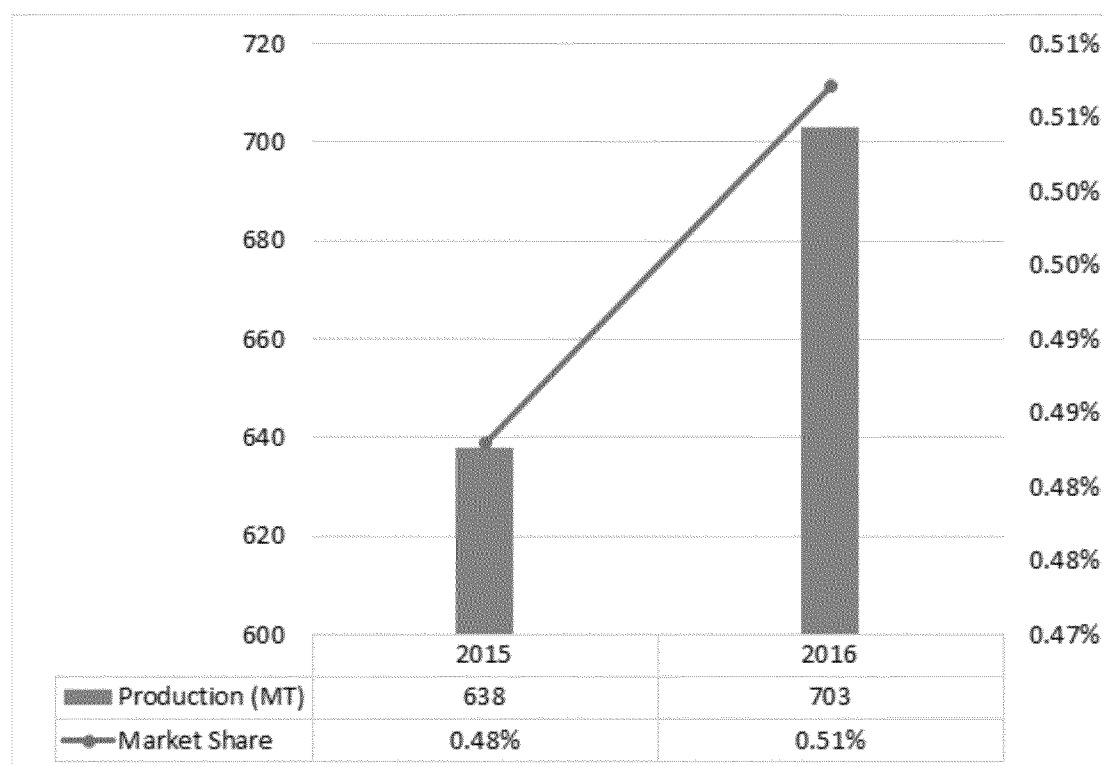
	2015	2016
Capacity(MT)	800	850
Production(MT)	638	703
Capacity Utilization Rate	79.75%	82.71%
Price(USD/MT)	13201	13172
Revenue(M USD)	8.42	9.26
Cost(USD/MT)	9737	9785
Gross(USD/MT)	3464	3387
Gross Margin	26.24%	25.71%

Source: EZ Strip; QYR Chemical &amp; Material Research Center, Feb 2017

**Figure EZ Strip Paint Remover Production and Capacity (2015 and 2016)**



Source: EZ Strip; QYR Chemical &amp; Material Research Center, Feb 2017

**Figure EZ Strip Paint Remover Production and Market Share (2015 and 2016)**

Source: EZ Strip; QYR Chemical & Material Research Center; Feb 2017

## 7.24.4 Contact Information

EZ Strip Canada Inc.  
3278 Marentette Avenue  
Windsor, Ontario  
N8X 4G4  
(866) 435-2511

## 7.25 Sansher Corporation



### 7.25.1 Company Basic Information

**Table Sansher Corporation Basic Information**

Item	Contents
------	----------

Name	Sansher Corporation
Website	<a href="http://www.dadseasyspray.com/">http://www.dadseasyspray.com/</a>
Plant Location	US, Canada, Mexico
Company Profile	<p>We have been in the chemical business since 1966, supplying specialty chemicals to industrial companies. We were engaged in the manufacturing and sales of paint removers, specialty solvents, and lubricants. Our specialty was the blending of custom -made paint removers that were supplied mostly to Fortune 500 Companies.</p> <p>From the experience and expertise of formulating hi -tech paint removers for industrial applications, Dad's Easy Spray was created. Sansher Corporation was founded in January 1983 to sell this product to the retail market. The background and knowledge of our industrial chemical company was used to incorporate unique features into Dad's Easy Spray that were not available on paint removers at the retail level. Many years of research and testing the properties of strippers have resulted in Dad's Easy Spray – the Original Trigger Spray Paint Remover.</p> <p>Today Dad's Easy Spray is sold throughout the United States, Canada and in Mexico.</p> <p>For over 25 years, Dad's Easy Spray has been the best friend of hobbyists and professionals alike.</p> <p>Dad's Easy Spray is the handyman's secret that fathers have passed on to their sons, and industry-masters passed on to their apprentices. The reason for this is simple...Dad's is the industry's best paint, stain and varnish remover!</p> <p>Dad's Easy Spray is the fastest -acting and easiest -to-use paint, stain and varnish remover that strips ALL finishes from wood, metal, masonry, glass and more. Over 25 years of research and testing has resulted in the fastest working, most versatile and easiest to use stripper available on the market today. It's special ingredients have been uniquely blended to provide a superior product that gels when sprayed on, creating the ideal environment for paint, stain and varnish removal.</p>
Key Products	Dad's Easy Spray® Paint, Stain & Varnish Remover
Key Sales Regions	US, EU, etc.
Business History	Since 1966

Source: Sansher Corporation; QYR Chemical & Material Research Center; Feb 2017

## 7.25.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
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Dad's Easy Spray that were not available on paint removers at the retail level. Many years of research and testing the properties of strippers have resulted in Dad's Easy Spray– the Original Trigger Spray Paint Remover.

Their product is nationally recognized. Many competitors have tried to copy our spray concept, with its unique blend of solvents in combination with the right balance of wetter, retardants and viscosity enhancers to no avail. We were Rated #1 out of 59 tested paint removers, August 1992 by Better Homes & Gardens Wood Magazine.

Source: Sansher Corporation; QYR Chemical & Material Research Center, Feb 2017

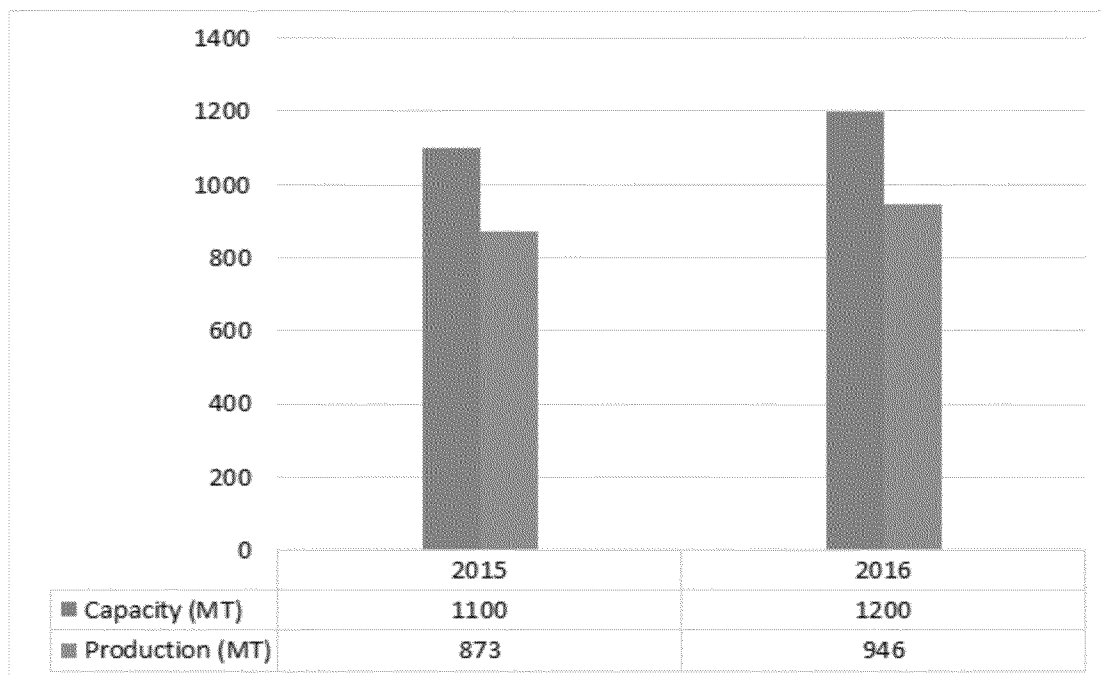
### 7.25.3 Sansher Corporation Paint Remover Capacity, Production, Revenue, Price and Gross Margin(2015 and 2016)

**Table Sansher Corporation Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	1100	1200
Production(MT)	873	946
Capacity Utilization Rate	79.36%	78.83%
Price(USD/MT)	8462	8440
Revenue(M USD)	7.39	7.98
Cost(USD/MT)	6864	6980
Gross(USD/MT)	1598	1460
Gross Margin	18.88%	17.30%

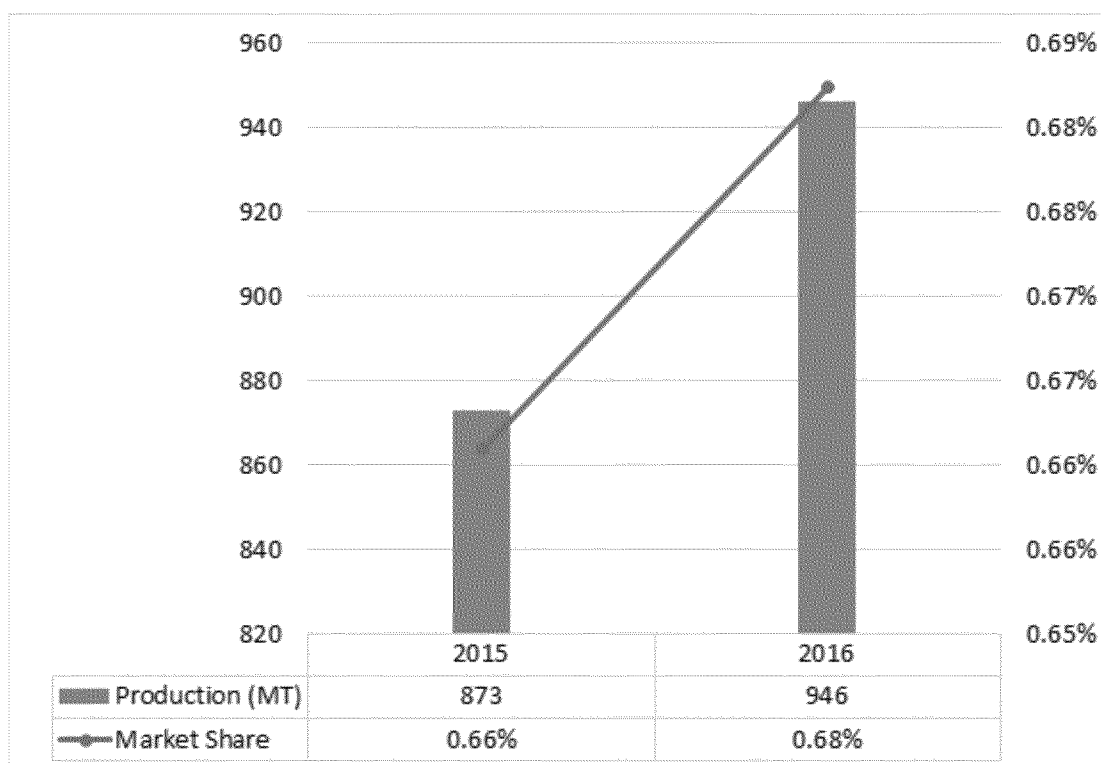
Source: Sansher Corporation; QYR Chemical & Material Research Center, Feb 2017

**Figure Sansher Corporation Paint Remover Production and Capacity (2015 and 2016)**



Source: Sansher Corporation; QYR Chemical & Material Research Center; Feb 2017

**Figure Sansher Corporation Paint Remover Production and Market Share (2015 and 2016)**

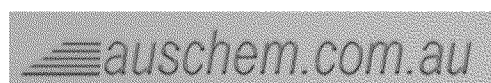


Source: Sansher Corporation; QYR Chemical & Material Research Center; Feb 2017

## 7.25.4 Contact Information

Sansher Corporation  
8005 North Clinton Street  
Fort Wayne, IN 46825  
260-484-2000  
info@dadseasyspray.com

## 7.26 Auschem



### 7.26.1 Company Basic Information

**Table Auschem Basic Information**

Item	Contents
Name	Auschem
Website	<a href="http://auschem.com.au/">http://auschem.com.au/</a>
Plant Location	Australia
Company Profile	<p>Founded in 1987, Australian Chemicals &amp; Coatings Pty Ltd is a wholly Australian owned &amp; operated company.</p> <p>Historically supplying metal treatment chemicals to the powdercoating and anodising industries, globally. With a wealth of knowledge within the company, we are able to custom formulate to specific needs. Over time this has allowed us to grow, keep up with modern advancements and continue “bring the best products to the surface”</p> <p>Our multi-function manufacturing facility in Dandenong South, Victoria currently produces a range of PVC plastisols, automotive refinishing chemicals, lubricants, cleaners, etching/passivating chemicals, strippers, as well as our renowned powdercoating and anodising ranges.</p> <p>The trading component of our business consists of PVC paste resin from the TPC Paste Resin Co (Thailand), specialised industrial lubricants from Condat Lubricants (France), Latexes and other commodity chemicals that relate to our industries.</p> <p>Alongside our own products we offer contract manufacturing services to companies for most blending processes. Currently we contract manufacture agricultural products, adhesives, sound deadening, environmentally friendly bathroom cleaners and specialty dangerous goods.</p>
Key Products	ADDITIVE 45P, AGRO 4506, ALKOGEL HIKLEAN, AUSTRIIP 6689,

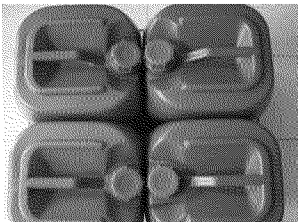


	BRIK BRITE etc.
Key Sales Regions	US, EU, etc.
Business History	Since 1987

Source: Auschem; QYR Chemical & Material Research Center; Feb 2017

## 7.26.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

	Figure	Description
AGRO 4506		AGRO 4506 is a heavy duty thickened acid activated methylene chloride based paint remover, and is designed to remove epoxies, polyurethanes, industrial and household paints from timber, metal or masonry substrates.

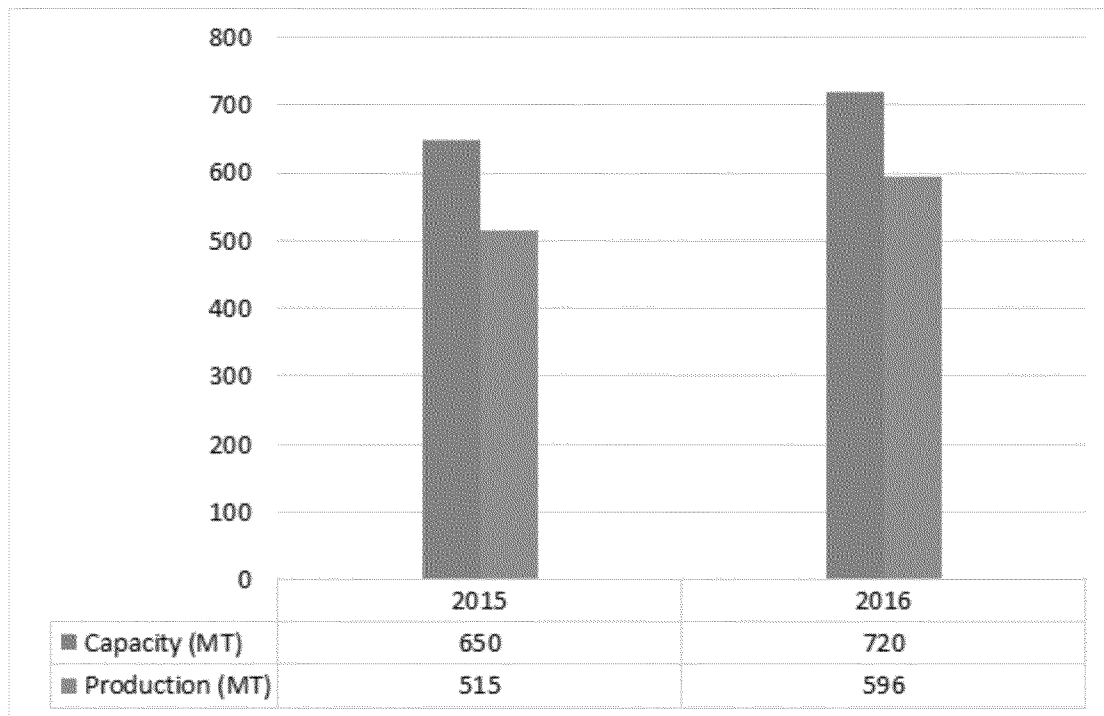
Source: Auschem; QYR Chemical & Material Research Center; Feb 2017

## 7.26.3 Auschem Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

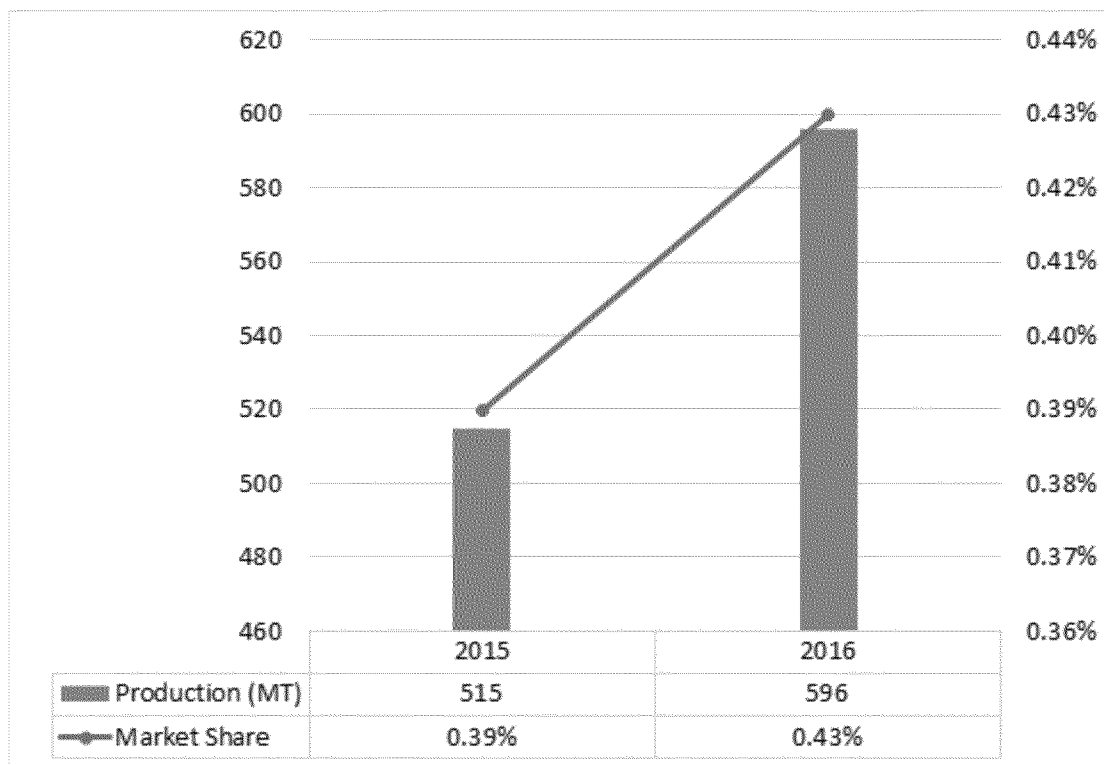
**Table Auschem Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	650	720
Production(MT)	515	596
Capacity Utilization Rate	79.23%	82.78%
Price(USD/MT)	10308	10252
Revenue(M USD)	5.31	6.11
Cost(USD/MT)	7688	7811
Gross(USD/MT)	2620	2441
Gross Margin	25.42%	23.81%

Source: Auschem; QYR Chemical & Material Research Center; Feb 2017

**Figure Auschem Paint Remover Production and Capacity (2015 and 2016)**

Source: Auschem; QYR Chemical & Material Research Center, Feb 2017

**Figure Auschem Paint Remover Production and Market Share (2015 and 2016)**

Source: Auschem; QYR Chemical & Material Research Center, Feb 2017

## 7.26.4 Contact Information

Dandenong South, Vic, 3175

Australia

Phone: (+61 3) 9799 9833

Fax: (+61 3) 9799 9033

E-mail: sales@auschem.com.au

## 7.27 Kimetsan Group



### 7.27.1 Company Basic Information


**Table Kimetsan Group Basic Information**

Item	Contents
Name	Kimetsan Group
Website	<a href="http://www.kimetsan.org/">http://www.kimetsan.org/</a>
Plant Location	Turkey
Company Profile	<p>Kimetsan Group aims;</p> <p>To continue to be a leader and pioneering company in Turkish Chemical Industry.</p> <p>To be a pioneering company in the world as well by means of continuous research and development activities to generate human safe and environmentally friendly high technology products.</p> <p>In order to maintain the continuous trustfulness in our company, our products and our outstanding service in Chemical, Metallurgical and Pharmaceutical Industry, our mission is;</p> <p>To manufacture or supply the appropriate and high quality products with competitive pricing.</p> <p>To provide after-sales technical support and services to satisfy customers consistently</p> <p>To manufacture environmentally friendly and human safe products and replace existing chemicals and materials to such products.</p>
Key Products	Water Borne Paint Removers/Strippers
Key Sales Regions	US, EU, etc.
Business History	Since 1986

Source: Kimetsan Group; QYR Chemical & Material Research Center; Feb 2017

## 7.27.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
Water Borne 	<p>Water Borne Paint Removers / Strippers Production Group manufactures advance water borne paint strippers or paint removers to strip single or two-pack any type solvent or water borne coatings.</p> <p>Kimetsan Paint Strippers do not contain any harmful or hazardous or restricted chemicals. Also the strippers do not corrode metals and generally safe for other surfaces as well however tests must be carried out for organic materials contact.</p>

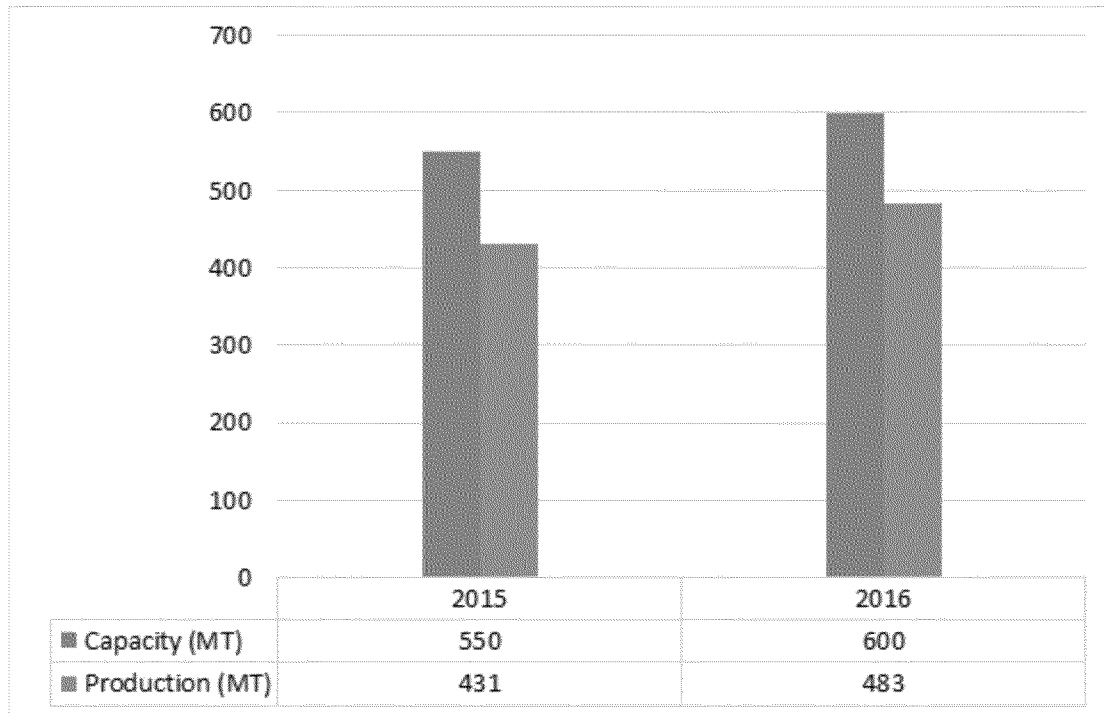
Source: Kimetsan Group; QYR Chemical & Material Research Center, Feb 2017

## 7.27.3 Kimetsan Group Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

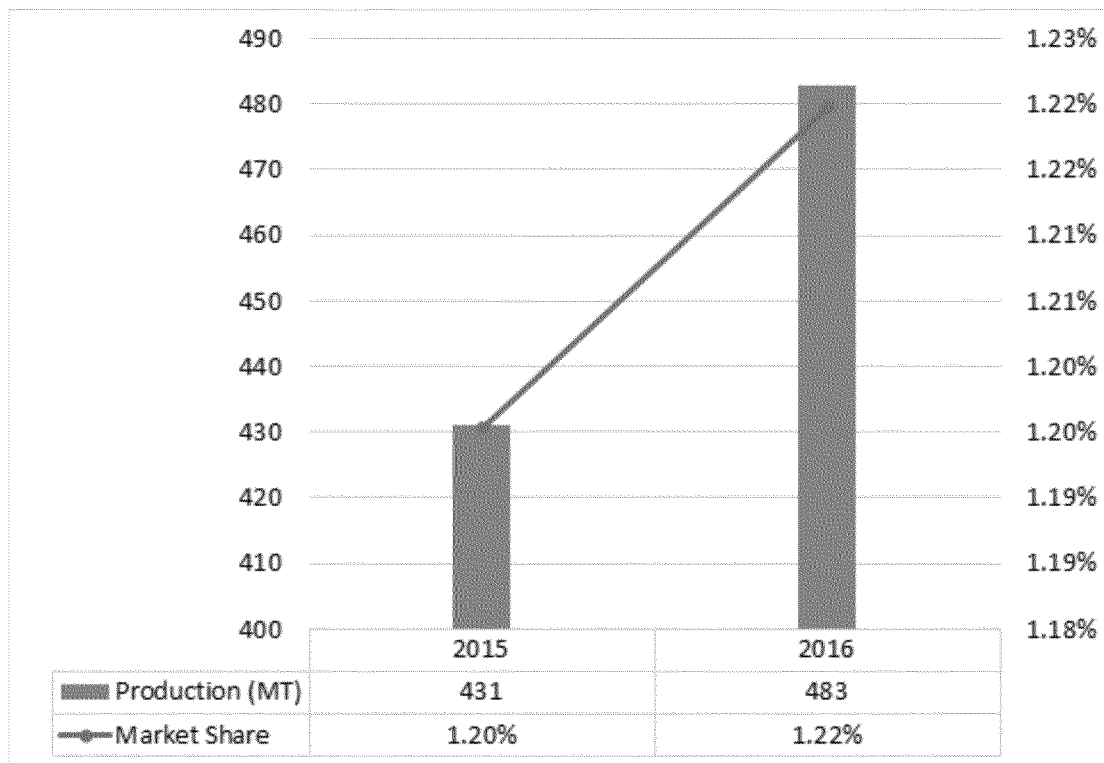
**Table Kimetsan Group Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	550	600
Production(MT)	431	483
Capacity Utilization Rate	78.36%	80.50%
Price(USD/MT)	9862	9751
Revenue(M USD)	4.25	4.71
Cost(USD/MT)	7240	7393
Gross(USD/MT)	2622	2358
Gross Margin	26.59%	24.18%

Source: Kimetsan Group; QYR Chemical & Material Research Center, Feb 2017

**Figure Kimetsan Group Paint Remover Production and Capacity (2015 and 2016)**

Source: Kimetsan Group; QYR Chemical & Material Research Center; Feb 2017

**Figure Kimetsan Group Paint Remover Production and Market Share (2015 and 2016)**

Source: Kimetsan Group; QYR Chemical & Material Research Center; Feb 2017

## 7.27.4 Contact Information

Address: Şehit Adem Yavuz Sokak No 11/5 Kızılay 06440 ANKARA

Phone: +90 312 417 49 77 – 418 23 91 (pbx)

Fax: +90 312 418 56 17

E-mail: kimetsan@kimetsan.com

## 7.28 Changsha Guterui



### 7.28.1 Company Basic Information

**Table Changsha Guterui Basic Information**

Item	Contents
Name	Changsha Guterui
Website	<a href="http://www.csgtr.com/">http://www.csgtr.com/</a>
Plant Location	Hunan, China
Company Profile	Changsha Guterui Novel Material Science and Technology Co., Ltd. were specialized in the production of various types of chemical products used for the metal surface treatment. It combines science, industry and trade into one high-tech enterprises. Long-term commitment to new technology, new progress' development, production, sales and service of metal surface treatment agent.
Key Products	GT-TQ520 paint/plasticizer remover
Business History	The company has introduced advanced technology formulations in Taiwan and abroad, and had their own R & D and professional service staff. Cooperated with Chemistry and Chemical Engineering College of Hunan Normal University, the company can provide customers a system solution of the product process selection, technical development consulting and services.

Source: Changsha Guterui; QYR Chemical & Material Research Center; Feb 2017

### 7.28.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

	Description
Paint Remover	The product does not require heating, stripping at room temperature, Speed: 1-20 minutes will paint removal.

High efficiency: Stripping rate of 95-100%.

Wide scope: This product can effectively remove all kinds of baking, paint and spray material;

Steel metal, aluminum, magnesium, copper, timber, cement and other substrates free from corrosion.

Retardant good performance, even in case of fire it does not burn.

The construction is simple, cost-effective, can be removed per kilogram of old paint from 4 to 10 square meters.

Small impact on human health.

Source: Changsha Guterui; QYR Chemical & Material Research Center; Feb 2017

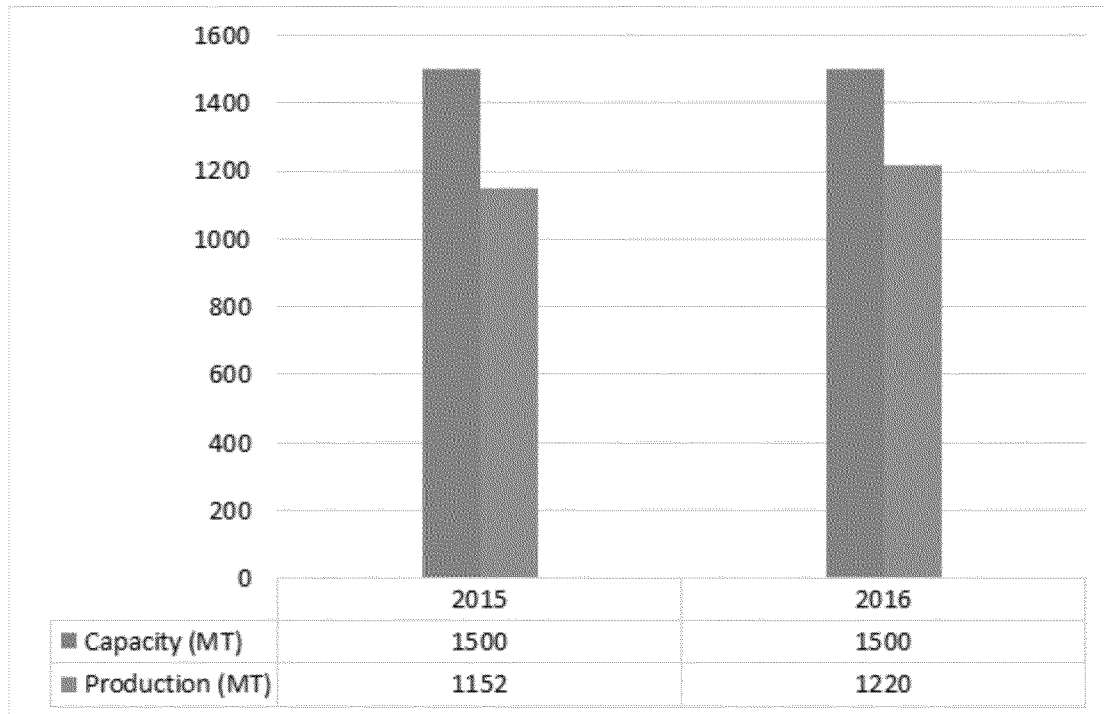
### 7.28.3 Changsha Guterui Paint Remover Capacity, Production, Revenue, Price and Gross Margin(2015 and 2016)

**Table Changsha Guterui Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	1500	1500
Production(MT)	1152	1220
Capacity Utilization Rate	76.80%	81.33%
Price(USD/MT)	3039	3015
Revenue(M USD)	3.50	3.68
Cost(USD/MT)	2542	2528
Gross(USD/MT)	497	487
Gross Margin	16.34%	16.14%

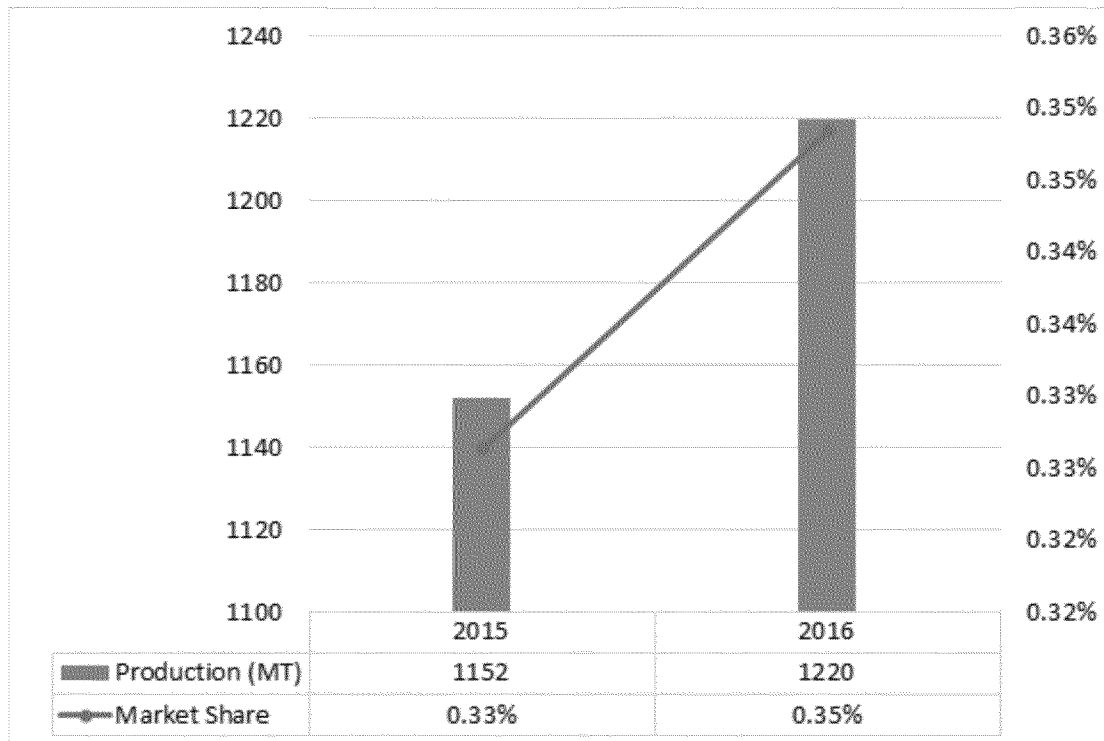
Source: Changsha Guterui; QYR Chemical & Material Research Center; Feb 2017

**Figure Changsha Guterui Paint Remover Production and Capacity (2015 and 2016)**



Source: Changsha Guterui; QYR Chemical & Material Research Center; Feb 2017

**Figure Changsha Guterui Paint Remover Production and Market Share (2015 and 2016)**



Source: Changsha Guterui; QYR Chemical & Material Research Center; Feb 2017



## 7.28.4 Contact Information

Address: 54 Dujuan Rd., Hexi High-tech. Zone, Changsha, Hunan, China

Tel: +86-731-88619255 88619266 400-0731-066

Fax: +86-731-88619266

Email: csgtr@163.com

## 7.29 TIMEASY



### 7.29.1 Company Basic Information

**Table TIMEASY Basic Information**

Item	Contents
Name	TIMEASY
Website	<a href="http://www.timetnew.com/">http://www.timetnew.com/</a>
Plant Location	Tianjin, China
Company Profile	Tianjin Timeasy Paint Science and Technology Co., Ltd. is a professional high-tech enterprise of industrial paint's development, sales and technical services. The company's products are widely used in petrochemical, power equipment, machinery manufacturing, urban construction, shipping ports, power plants, water conservancy, metallurgy, bridges, coal mines, special vehicles, steel corrosion engineering and other major industries, with stable product quality, strong sales service system and high-quality tailored matching system, the company won the majority of customers' trust and praise.
Key Products	KT-1 effective Paint remover. ABS plastic Paint remover. BT- enameled Paint remover. Silicone paint Paint remover etc. (totally 23 kinds of products)
Business History	The company has its own R & D center and quality inspection center, and in cooperation with the local relevant factories. Strict control of product quality, the company provides customers with a full range of services.

Source: TIMEASY; QYR Chemical & Material Research Center; Feb 2017

## 7.29.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

		Description
KT-1 efficient remover	Paint	<p>With the stripping rate is very rapid (within 1 to 3 minutes), easy to wash, no corrosive effect on metal</p> <p>Non-flammable, have a certain viscosity, does not flow in a vertical surface, high stripping efficiency, general can remove old paint in once (ordinary Paint remover need 5 to 7 times to clean off)</p> <p>Widely used in the equipment and products of automotive, shipbuilding, aerospace, military, telecommunications, machinery, chemical etc. industry. Especially suitable for epoxy, silicone, powders, alkyd's removal.</p>

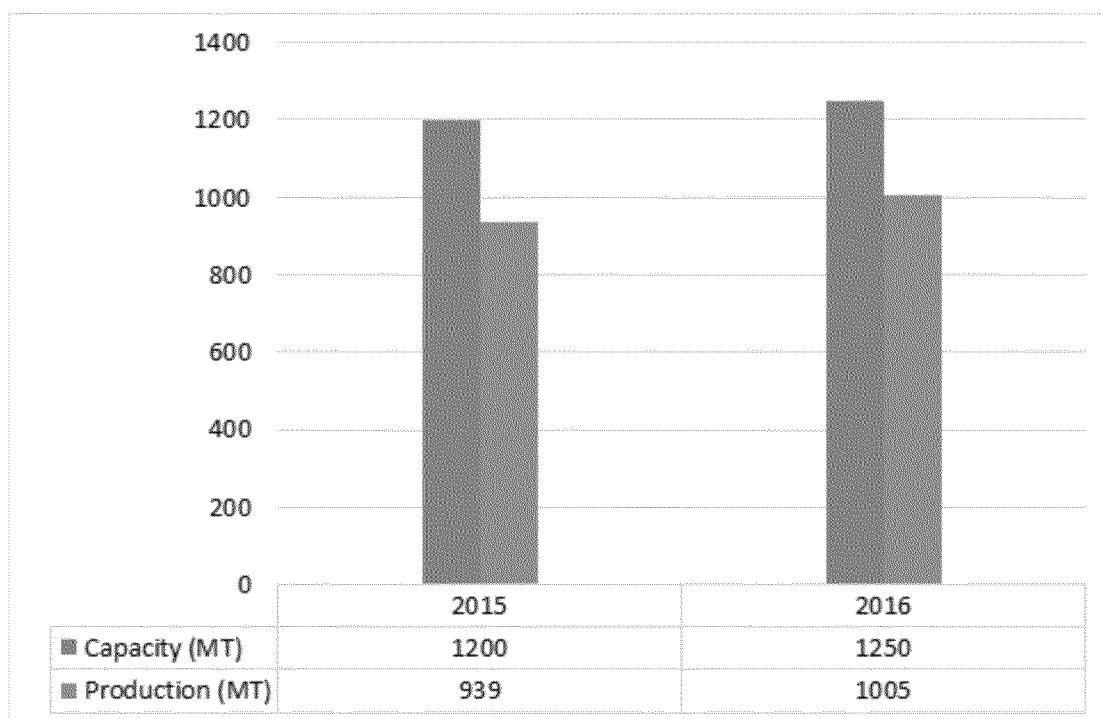
Source: TIMEASY; QYR Chemical & Material Research Center, Feb 2017

## 7.29.3 TIMEASY Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

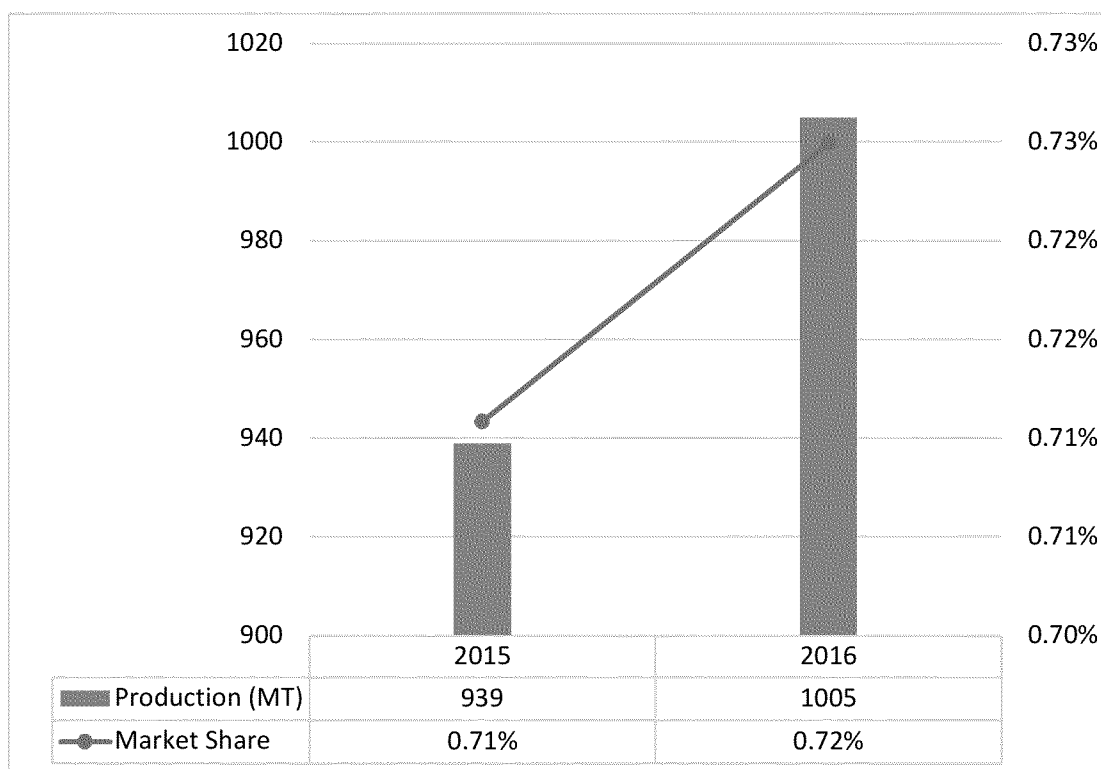
**Table TIMEASY Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	1200	1250
Production(MT)	939	1005
Capacity Utilization Rate	78.25%	80.40%
Price(USD/MT)	3266	3230
Revenue(M USD)	3.07	3.25
Cost(USD/MT)	2695	2659
Gross(USD/MT)	571	571
Gross Margin	17.48%	17.67%

Source: TIMEASY; QYR Chemical & Material Research Center, Feb 2017

**Figure TIMEASY Paint Remover Production and Capacity (2015 and 2016)**

Source: TIMEASY; QYR Chemical &amp; Material Research Center, Feb 2017

**Figure TIMEASY Paint Remover Production and Market Share (2015 and 2016)**

Source: TIMEASY; QYR Chemical &amp; Material Research Center, Feb 2017

## 7.29.4 Contact Information

Address: New road No. 189, Hebei District, Tianjin, China.

Tel: +86-22-27059199 +86-13212201570

Fax: +86-22-27713133

## 7.30 BODE



### 7.30.1 Company Basic Information

**Table BODE Basic Information**

Item	Contents
Name	BODE
Website	<a href="http://dgbode.cn/">http://dgbode.cn/</a>
Plant Location	Guangzhou, China
Company Profile	Dongguan City Bode Chemical Technology Co., Ltd. (China) established in 2003, invested by German private equity investment fund which focused on the high-tech chemical and Beijing European gem product Co., Ltd.
Key Products	Acidic Paint remover paint BOD630. Weakly acidic Paint remover paint BOD630C, alkaline Paint remover paint BOD650A, neutral Paint remover paint BOD639,
Business History	The company founded R & D team s since 2006, and every year invest a large proportion of funds for research and development. Currently had three research bases in Beijing, Hunan, Shanghai, and in cooperation with major domestic research institutes, academic bodies, universities (Guangdong Zhongshan University, Hunan Branch University, Shanghai Donghua University, Beijing Institute of Technology)

Source: BODE; QYR Chemical & Material Research Center, Feb 2017

### 7.30.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
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Color: Colorless and transparent  
 Distillation range: 30-110°C  
 Flash point: Non-flammable  
 Status: Liquid  
 Density: 1.2-1.3  
 Odor: Irritating odor

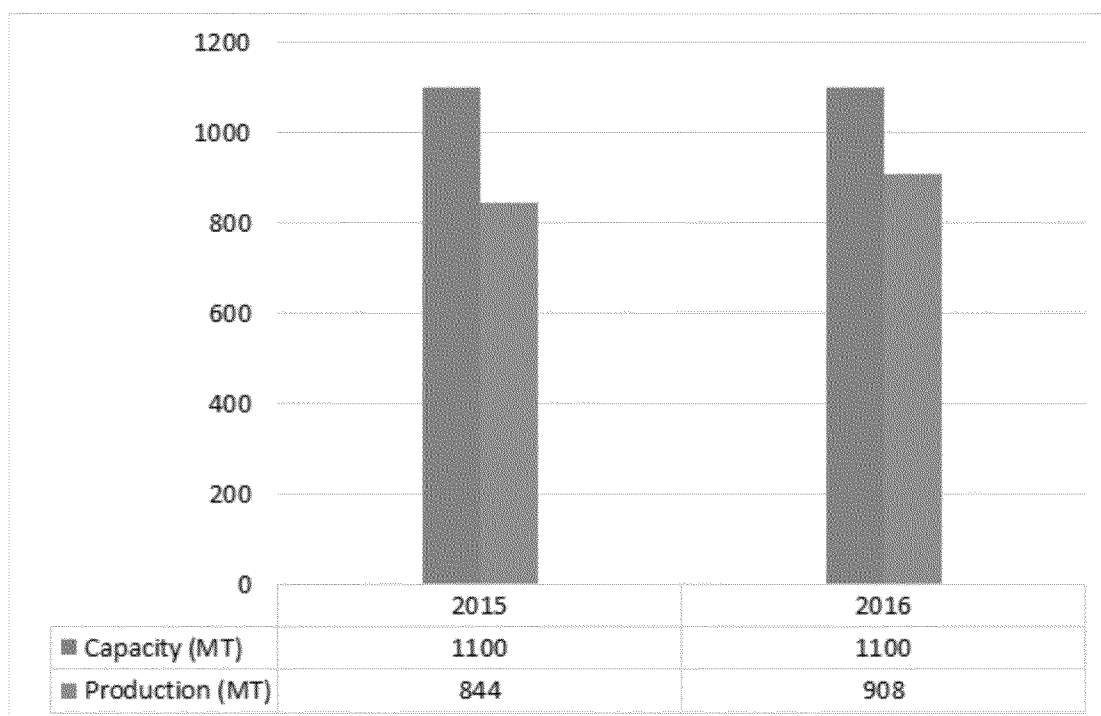
Source: BODE; QYR Chemical & Material Research Center; Feb 2017

### 7.30.3 BODE Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

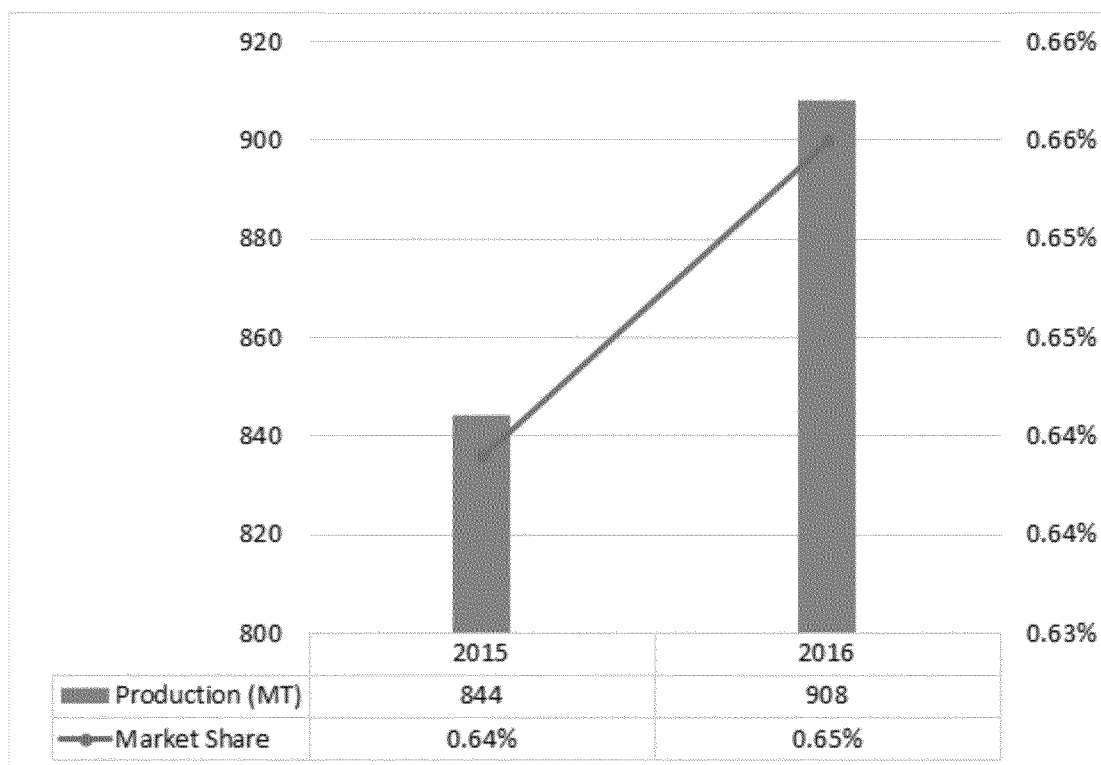
**Table BODE Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	1100	1100
Production(MT)	844	908
Capacity Utilization Rate	76.73%	82.55%
Price(USD/MT)	2495	2477
Revenue(M USD)	2.11	2.25
Cost(USD/MT)	2001	2005
Gross(USD/MT)	494	472
Gross Margin	19.78%	19.07%

Source: BODE; QYR Chemical & Material Research Center; Feb 2017

**Figure BODE Paint Remover Production and Capacity (2015 and 2016)**

Source: BODE; QYR Chemical & Material Research Center, Feb 2017

**Figure BODE Paint Remover Production and Market Share (2015 and 2016)**

Source: BODE; QYR Chemical & Material Research Center, Feb 2017

## 7.30.4 Contact Information

Add: Southern District, Dongguan City, Guangdong Province, China.

Tel: +86-769-21681060

Fax: +86-76921684252

## 7.31 Hairi Cleaning



### 7.31.1 Company Basic Information

**Table Hairi Cleaning Basic Information**

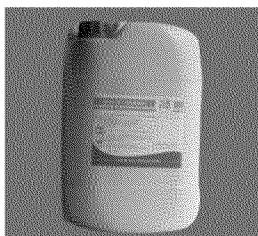
Item	Contents
Name	Hairi Cleaning
Website	<a href="http://www.gzhrwash.com/">http://www.gzhrwash.com/</a>
Plant Location	Guangzhou, China
Company Profile	Guangzhou Hairi Cleaning Technology Co., Ltd. is a company specializing in the development of various types of chemical cleaning agent, mainly sales of environmentally friendly industrial cleaning agents, oil cleaning agent, metal cleaning agents, Paint remover, cleaning water treatment agent, cleaning agents etc. many series. The company is the leading brand of industrial cleaning agents.
Key Products	Efficient stripping / degumming agent HR-977 and HR-977A
Business History	The companies rely on a strong technological advantages and rich practical experience, provides convenient to the equipment's maintenance in the telecommunications, power and other industrial enterprises, opened the charged cleaning precedent. The company research and development, and take the processing cleaning products for much large, medium and small enterprises.

Source: Hairi Cleaning; QYR Chemical & Material Research Center; Feb 2017

### 7.31.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
--------	-------------



Characteristic: HR-977/HR-977A  
 Color: Light yellow transparent liquid  
 Colorless and transparent  
 Odor: Solvent smell/Smell fragrance  
 Density:  $1.20 \pm 0.05$   $1.05 \pm 0.05$   
 Flash point: Non-flammable/Non-flammable

Source: Hairi Cleaning; QYR Chemical & Material Research Center, Feb 2017

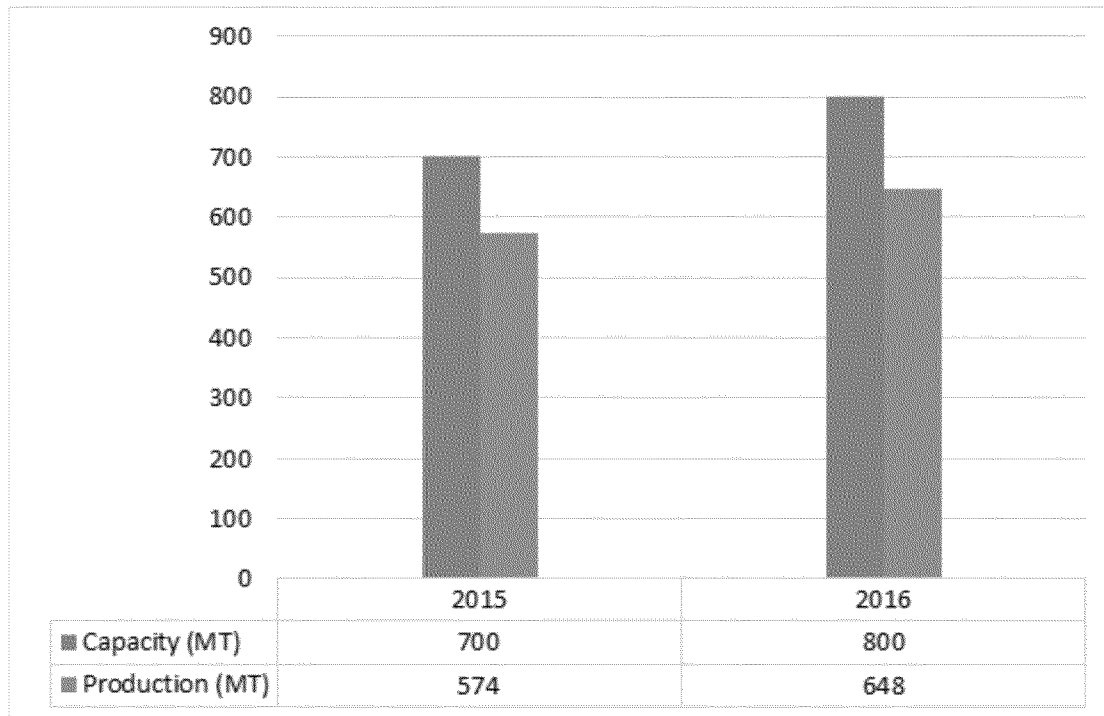
### 7.31.3 Hairi Cleaning Paint Remover Capacity, Production, Revenue, Price and Gross Margin (2015 and 2016)

**Table Hairi Cleaning Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

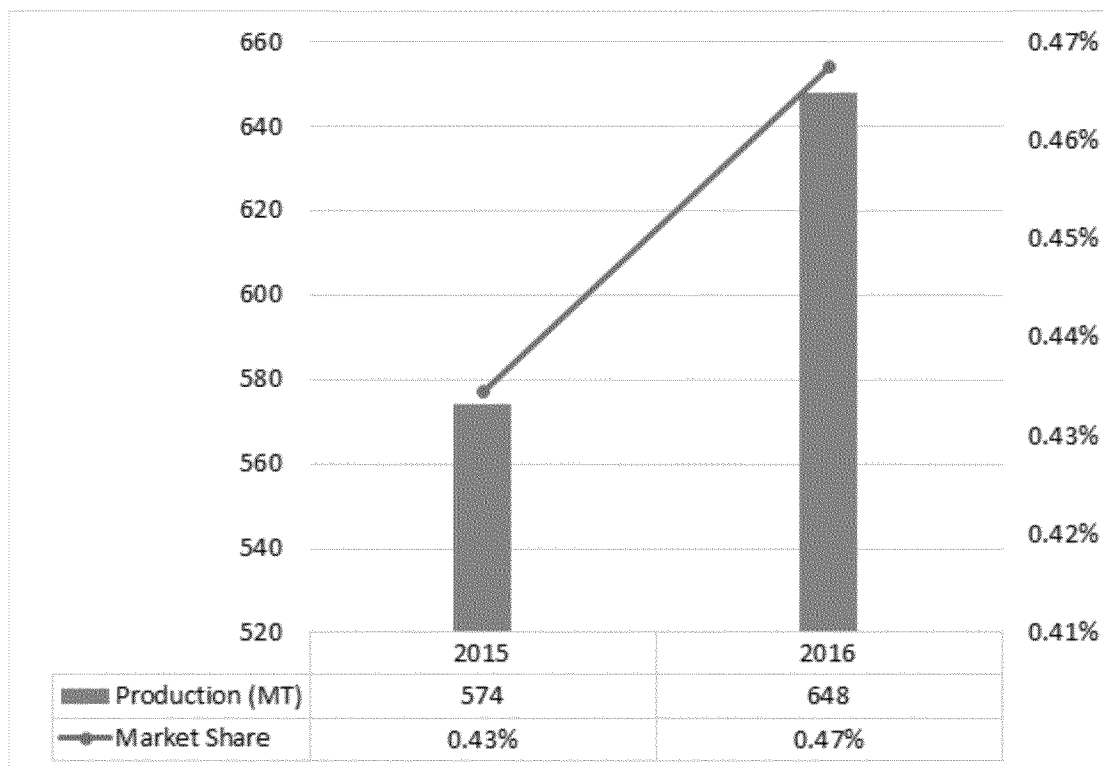
	2015	2016
Capacity(MT)	700	800
Production(MT)	574	648
Capacity Utilization Rate	82.00%	81.00%
Price(USD/MT)	2074	2046
Revenue(M USD)	1.19	1.33
Cost(USD/MT)	1705	1717
Gross(USD/MT)	369	329
Gross Margin	17.78%	16.07%

Source: Hairi Cleaning; QYR Chemical & Material Research Center, Feb 2017



**Figure Hairi Cleaning Paint Remover Production and Capacity (2015 and 2016)**

Source: Hairi Cleaning; QYR Chemical & Material Research Center; Feb 2017

**Figure Hairi Cleaning Paint Remover Production and Market Share (2015 and 2016)**

Source: Hairi Cleaning; QYR Chemical & Material Research Center; Feb 2017

## 7.31.4 Contact Information

Add: Room 306, Building C, Huangpu Avenue Road No. 203, Tianhe District, Guangzhou City, China

Tel +86-20-85690958

Fax extension 810

E-mail gzhairi@163.com

## 7.32 DOMIN Chemical



### 7.32.1 Company Basic Information

**Table DOMIN Chemical Basic Information**

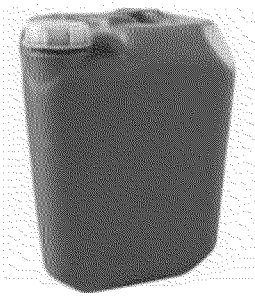
Item	Contents
Name	DOMIN Chemical
Website	<a href="http://www.dominchem.com/">http://www.dominchem.com/</a>
Plant Location	Guangzhou, China
Company Profile	<p>Founded in 2005 , Domin Chemical Co., Ltd., which covers an area of 36,900 square meters, is located in the road of Guangzhou –Shantou Luoyang, Boluo County, Huizhou City, Guangdong Province PRC. The company is fully equipped with manufacturing and living facilities, including a modern office building, two full -featured staff dormitories which can accommodate about 1000 people, a widely used chemical industry laboratory building with the best testing equipment facilities, thousands of square meters of warehouse for class A hazardous chemicals, organic solvents stainless steel tanks and six standard chemical workshops.</p> <p>Domin Chemical Co., Ltd. has three branches. They are Huizhou Hon Ya Metal Material Treating Co., Ltd. Donghong Polymer Materials Co., Ltd. and Wuhan Xinhongya Metal Material Treating Co., Ltd. Domin Chemical Co., Ltd. produces series of industrial paint products and sells some organic solvents, such as benzene, ketone, ester, alcohols etc . Hon Ya Metal Material Treating Co., Ltd. handles series of pre-treatment products, and Wuhan Xinhongya mainly sells products that produced by Hon Ya and Domin. The overall pattern forms an integrated Domin clustering - operation strategic layout.</p>
Key Products	Magnesium alloy paint remover, WHY-601TQ Carbon fiber paint, WHY-

Business History	<p>601MH Magnesium alloy paint, degumming , WHY-601HB Removal of ink solvent , WHY-601D-2 Wiper paint , WHY-601D-1 Die casting aluminum off powder, WHY-601D Galvanized sheet off powder, etc.</p> <p>The company has a strong research and development team, with nearly ten independent research and development of proprietary products and intellectual property management system. We provide professional solution and technical support for our customers in the field of Light Curing paint (UV) , plastic paint, metal paint, rubber paint and various metal pre-treatment series of cleaning agents, coating agents, rust remover and anti-rust deruster, and environmentally friendly paint remover etc.,. Our products which has reached the international quality requirement are widely used in producing aircraft, automobiles, electronics, plastic, metal, IT and other industries.</p> <p>Having passed ISO9001 international quality system certification, our company has fully aligned with international standards and established and improved the corporation quality assurance system. All its products have passed the ROHS certification of SGS Company</p>
------------------	--

Source: DOMIN Chemical; QYR Chemical & Material Research Center; Feb 2017

## 7.32.2 Paint Remover Product Types and Specification

**Table Paint Remover Product Types and Specification**

Figure	Description
	<p>Paint process</p> <p>Soaking, high-pressure water washing and drying</p> <p>Process Description: the object to be processed completely into the agent, after the article surface paint foaming loose objects, proposed water cleaning to dry.</p> <p>Product introduction</p> <p>Product Name: magnesium alloy paint remover</p> <p>Character: the acid liquid</p> <p>Packaging specifications: 25kg/ bucket</p> <p>Use the parameters: use solution</p>

Source: DOMIN Chemical; QYR Chemical & Material Research Center; Feb 2017

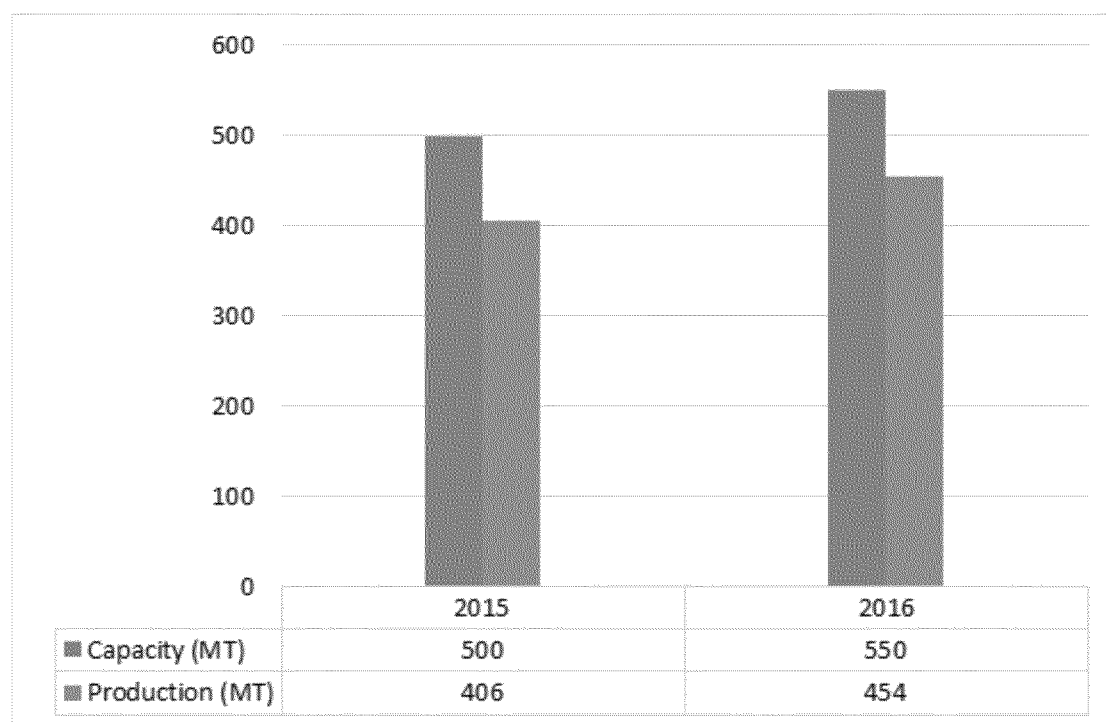
### 7.32.3 DOMIN Chemical Paint Remover Capacity, Production, Revenue, Price and Gross Margin(2015 and 2016)

**Table DOMIN Chemical Paint Remover Capacity (MT), Production (MT), Revenue (M USD), Price (USD/MT) and Gross Margin (2015-2016)**

	2015	2016
Capacity(MT)	500	550
Production(MT)	406	454
Capacity Utilization Rate	81.20%	82.55%
Price(USD/MT)	2839	2800
Revenue(M USD)	1.15	1.27
Cost(USD/MT)	2279	1054
Gross(USD/MT)	560	1746
Gross Margin	19.73%	62.36%

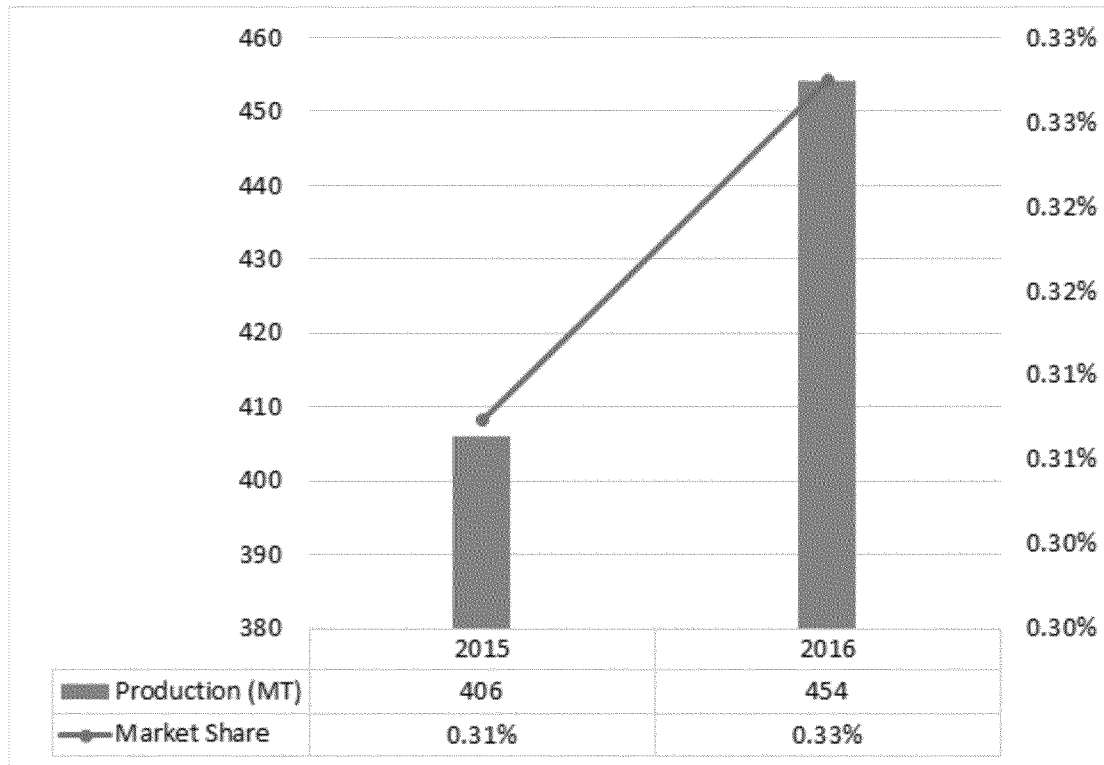
Source: DOMIN Chemical; QYR Chemical & Material Research Center; Feb 2017

**Figure DOMIN Chemical Paint Remover Production and Capacity(2015 and 2016)**



Source: DOMIN Chemical; QYR Chemical & Material Research Center; Feb 2017

**Figure DOMIN Chemical Paint Remover Production and Market Share (2015 and 2016)**



Source: DOMIN Chemical; QYR Chemical & Material Research Center, Feb 2017

### 7.32.4 Contact Information

Add: next to Guangzhou-Shantou Highway, Niutianling, Xingjie Village,  
 Luoyang Town, Boluo County, Huizhou City  
 Tel: +86-752 -5895266  
 Fax: +86-752 -6677106  
 E-mail: [service@dominche.com](mailto:service@dominche.com)

## 8 Paint Remover Manufacturing Cost Analysis

### 8.1 Paint Remover Key Raw Materials Analysis

#### 8.1.1 Key Raw Materials

**Table Production and Supplier of Raw Material**

Major Raw Materials	Product Picture	Raw Material Suppliers
Methylene Chloride		Tokuyama Dongyue Federation Shangdong Luxi Juhua Group
Ethanol		Yongxiang Alcohol Manufacturing Kingswealth Group Donggang Xinyuan Chemical
Methanol		Anhui Haoyuan Chemical Industry Group Hebei Zhengyuan Dongguan Jovo
Sulfuric acid		Zhe Jiang Jiacheng Chemical Juhua Group Corporation
Formic acid		Shijiazhuang Taihe Chemical BASF Beijing Chemical Industry Group

Source: QYR Chemical & Material Research Center, Feb 2017

## 8.1.2 Price Trend of Key Raw Materials

**Figure Price Trend of Key Raw Materials**

Major Raw Materials	Product Picture	Price Scope (USD/MT)
Methylene Chloride		300-500 USD/MT
Ethanol		890-975 USD/MT
Methanol		470-650 USD/MT
Sulfuric acid		65-110 USD/MT
Formic acid		1200-1400 USD/MT

Source: PPI, Alibaba, HC360, Guidechem Chemical Network, QYR Chemical & Material Research Center, Feb 2017

## 8.1.3 Key Suppliers of Raw Materials

**Table Key Suppliers of Raw Materials**

Raw Materials	Raw Material Suppliers	Website
Methylene	Tokuyama	<a href="http://www.tokuyama.co.jp/">http://www.tokuyama.co.jp/</a>
Chloride	Dongyue Federation	<a href="http://www.dongyuechem.com/">http://www.dongyuechem.com/</a>

Ethanol	Shangdong Luxi	<a href="http://www.luxichemical.com/">http://www.luxichemical.com/</a>
	Juhua Group	<a href="http://www.juhua.com.cn/">http://www.juhua.com.cn/</a>
	Wu Jiang Yongxiang Alcohol	<a href="http://yxjiujing.cn.jianso.com/">http://yxjiujing.cn.jianso.com/</a>
	Kingswealth Group	<a href="http://www.gxjyfdc.com/">http://www.gxjyfdc.com/</a>
Methanol	Donggang Xinyuan Chemical	<a href="http://www.xyhggs.com/">http://www.xyhggs.com/</a>
	Anhui Haoyuan Chemical Industry Group	<a href="http://www.chinahaoyuan.com/">http://www.chinahaoyuan.com/</a>
	Hebei Zhengyuan	<a href="http://www.hbzyjt.com.cn/">http://www.hbzyjt.com.cn/</a>
	Dongguan Jovo	<a href="http://www.jovo.com.cn/">http://www.jovo.com.cn/</a>
Sulfuric acid	Zhe Jiang Jiacheng Chemical	<a href="http://www.jacheng.com/">http://www.jacheng.com/</a>
	Juhua Group Corporation	<a href="http://www.juhua.com.cn/">http://www.juhua.com.cn/</a>
Formic acid	Shijiazhuang Taihe Chemical	<a href="http://www.taihechemical.com/">http://www.taihechemical.com/</a>
	BASF	<a href="https://www.basf.com/cn/">https://www.basf.com/cn/</a>
	Beijing Chemical Industry Group	<a href="http://www.bcigc.com/">http://www.bcigc.com/</a>

Source: Above Companies; QYR Chemical & Material Research Center, Feb 2017

## 8.2 Proportion of Manufacturing Cost Structure

Paint remover's production process is different from the production process of general chemical products. It does not depend on a specific response. Most products are composed of various ingredients in a formulation. Thus the raw materials accounts for a large proportion of the cost structure, although the specific value varies with the recipe. The following is a paint remover's raw material cost structure with the Methylene Chloride as a solvent.

**Table Manufacturing Cost Structure Analysis of Paint Remover in 2016**

Item		%
Direct Production Cost	Direct Raw Material	52.37
	Direct Labor	5.42
	Other Direct Cost	3.18
Indirect Production Cost	Indirect Raw Material	11.23
	Indirect Labor	4.05
	Other Indirect Cost	3.02
Equipment depreciation	Equipment depreciation	2.25
Energy Cost	Energy Cost	9.65
Other Cost	Other Cost	8.83
Total	Total Cost	100

Source: QYR Chemical & Material Research Center, Feb 2017

### 8.2.1 Raw Materials

Paint remover has different formulations according to different purposes. There are very large differences between different formulations' ingredients. Generally used raw materials are Methylene Chloride, ethanol, methanol, sulfuric acid and etc.



## 8.2.2 Labor Cost

Considering the labor cost, China, Kirghizstan, India, Philippines, Pakistan, and Tajikistan all have cost advantage. In contrast with above countries, Luxembourg, Norway, Austria, USA, England, Belgium, Sweden, and others have high labor cost.

**Figure China Overview of Labor Cost 2017**

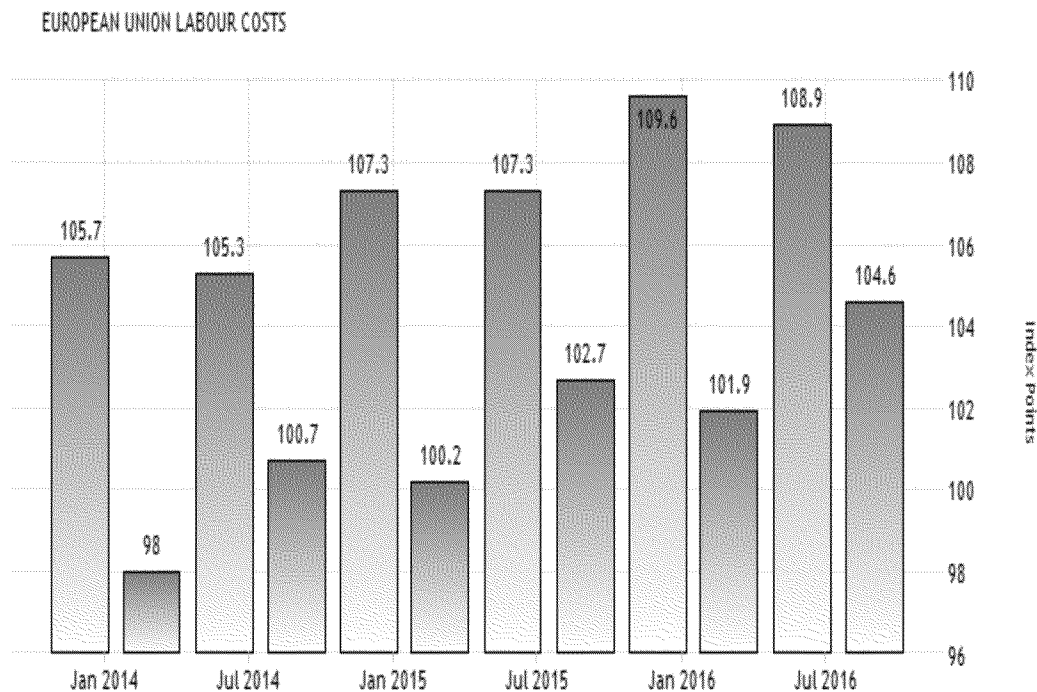


Source: Trading Economics, National Bureau of Statistics of China, QYR Chemical & Material Research Center, Feb 2017

**Figure USA Overview of Labor Cost 2017**

Source: Trading Economics, National Bureau of Statistics of USA, QYR Chemical & Material Research Center, Feb 2017

United States Nonfarm Unit Labor Cost Forecasts are projected using an autoregressive integrated moving average (ARIMA) model calibrated using our analysis expectations. We model the past behavior of United States Nonfarm Unit Labor Cost using vast amounts of historical data and we adjust the coefficients of the econometric model by taking into account our analysis assessments and future expectations. The forecast for - United States Nonfarm Unit Labor Cost - was last predicted on Tuesday, February 21, 2017.

**Figure Europe Overview of Labor Cost 2016**

Source: Trading Economics, Eurostat, QYR Chemical & Material Research Center, Feb 2017

This page provides - European Union Labor Costs - actual values, historical data, forecast, chart, statistics, economic calendar and news. European Union Labor Costs - actual data, historical chart and calendar of releases - was last updated on February of 2017.

**Figure Monthly Minimum Wages in Asia 2016**

Source: QYR Chemical & Material Research Center, Feb 2017

Average wages in China usually increase by around ten percent a year, according to official figures, and as a result, the pay gap between many low-paid workers and those earning the average wage is actually widening in real terms. The growing disparity between low -paid manual labourers and managers and professionals has been particularly apparent in China's state -owned enterprises (SOEs).

### 8.2.3 Manufacturing Expenses

Manufacturing overhead (also referred to as factory overhead, factory burden, and manufacturing support costs) refers to indirect factory -related costs that are incurred when a product is manufactured. Along with costs such as direct material and direct labor, the cost of manufacturing overhead must be assigned to each unit produced so that Inventory and Cost of Goods Sold are valued and reported according to generally accepted accounting principles (GAAP).

**Table 5.6.A. Average Price of Electricity to Ultimate Customers by End-Use Sector**

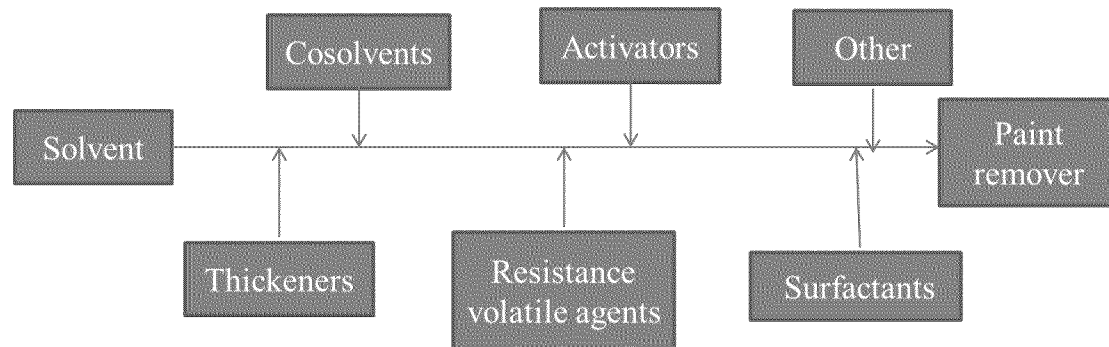
	Commercial		Industrial		Transportation	
Census Division	November 2016	November 2015	November 2016	November 2015	November 2016	November 2015
New England	15.02	14.63	11.96	12.14	7.19	8.69
Connecticut	16.45	15.27	12.82	12.97	8.99	11.04
Maine	12.46	13.02	9.16	8.96	--	--
Massachusetts	14.89	14.60	12.89	13.19	5.26	6.75
Hampshire	14.67	14.39	12.33	12.62	--	--
Rhode Island	14.48	14.54	13.47	13.25	19.23	19.29
Vermont	14.78	14.63	9.91	10.11	--	--
New Jersey	11.76	12.04	9.66	9.69	8.39	9.37
New York	13.99	14.04	5.87	5.87	11.23	12.14
Pennsylvania	9.15	9.50	6.78	6.98	7.27	8.32
East North	10.03	9.93	6.98	6.87	7.20	7.38
Illinois	8.77	8.99	6.34	6.45	6.91	7.18
Indiana	10.36	9.84	7.53	6.85	11.35	10.30
Michigan	10.99	10.51	7.15	6.81	12.10	11.64
Ohio	10.04	10.22	6.67	7.11	8.00	7.83
Wisconsin	10.77	10.47	7.59	7.25	15.00	16.67
West North	9.19	8.85	6.63	6.49	8.72	8.61
Iowa	8.78	8.09	5.20	5.13	--	--
Kansas	9.87	9.96	7.23	7.49	--	--
Minnesota	10.22	9.06	7.17	7.03	10.16	9.54
Missouri	8.43	8.71	6.36	6.00	7.17	7.38
Nebraska	8.48	8.24	6.87	6.92	--	--
North Dakota	9.08	8.45	8.44	7.84	--	--
South Dakota	9.50	9.08	7.44	7.07	--	--
South Atlantic	9.27	9.30	6.19	6.19	7.90	7.91

Delaware	10.07	10.68	7.42	8.13	--	--
Columbia	11.77	12.03	8.64	9.06	9.43	9.21
Florida	9.23	9.43	7.88	8.01	8.51	9.19
Georgia	9.76	9.19	5.46	5.25	4.66	4.37
Maryland	11.04	10.60	7.79	8.28	7.90	7.88
Virginia	7.81	8.13	6.62	6.83	7.82	7.60
West Virginia	9.76	9.13	6.79	6.24	--	--
East South	10.35	10.14	5.85	5.69	--	--
Alabama	11.33	10.51	5.99	5.46	--	--
Kentucky	9.71	9.56	5.52	5.50	--	--
Mississippi	9.95	10.27	6.03	6.26	--	--
Tennessee	10.23	10.15	5.93	5.88	--	--
West South	7.69	7.97	5.23	5.26	5.84	5.57
Arkansas	8.02	8.25	5.72	6.09	11.70	9.45
Louisiana	8.61	8.50	5.13	5.24	9.60	7.56
Oklahoma	6.80	7.23	4.62	4.84	--	--
Texas	7.62	7.95	5.29	5.23	5.59	5.43
Mountain	9.28	9.25	5.74	5.95	9.85	9.80
Arizona	9.64	9.46	5.71	5.54	9.23	7.96
Colorado	9.90	9.86	7.26	7.14	10.15	9.96
Idaho	7.90	7.57	5.75	5.74	--	--
Montana	10.22	10.13	4.75	5.05	--	--
Nevada	7.73	8.94	3.16	5.21	7.34	8.51
New Mexico	9.55	9.74	5.65	5.92	--	--
Utah	8.55	8.12	5.58	5.65	9.94	9.95
Wyoming	9.78	9.24	6.85	6.63	--	--
California	14.37	14.76	12.03	12.07	7.83	8.37
Oregon	8.93	8.84	6.38	6.04	9.34	9.25
Washington	8.49	8.49	4.73	4.47	9.24	9.00
Alaska	18.26	17.39	16.15	15.54	--	--
Hawaii	25.90	24.64	21.89	20.76	--	--
U.S. Total	10.25	10.30	6.64	6.61	9.04	9.63

Source: EIA, QYR Chemical &amp; Material Research Center, Feb 2017

## 8.3 Manufacturing Process Analysis of Paint Remover

**Figure Manufacturing Process Analysis of Paint Remover**

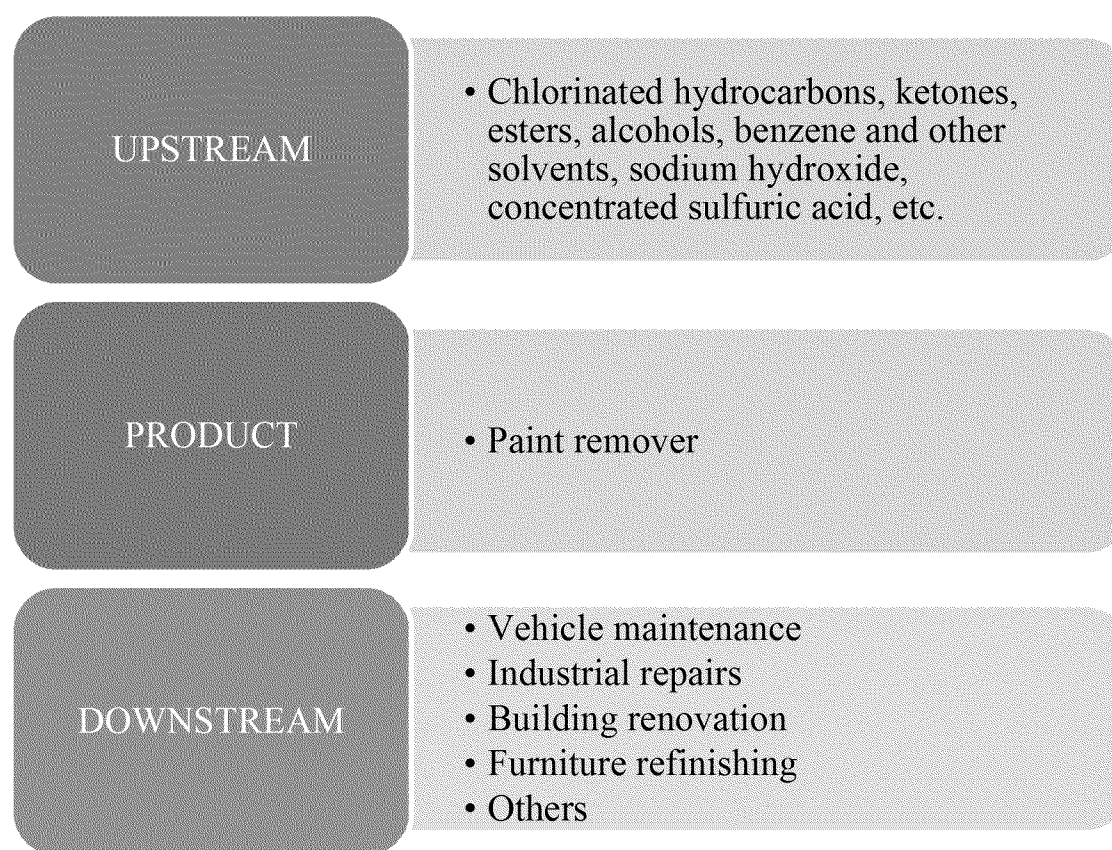


Source: QYR Chemical & Material Research Center, Feb 2017

## 9 Industrial Chain, Sourcing Strategy and Downstream Buyers

### 9.1 Paint Remover Industrial Chain Analysis

Figure Paint Remover Industrial Chain Analysis



Source: QYR Chemical & Material Research Center, Feb 2017

### 9.2 Upstream Raw Materials Sourcing

Raw Materials are important component, occupying for the most proportion of cost. It's important and necessary to attach importance to raw materials sourcing.

In general, the raw materials need to out sourcing, and the price, on-time rate and quality are very key indicators, to keep competitive market position, to maximize the profit.

Actually, the price, on -time rate or quality, is just one of key factors to influence on the supply capacity and competitiveness. The lowest total production cost is the total index to maximize the profit.

To a producer, can control the total production cost through worldwide procurement, localization procurement and concentrative purchase, more purchasing focuses on fewer suppliers to large-scale purchase, to large-scale and high efficiency. Now the logistics and information is well-developed, beneficial to worldwide procurement, localization procurement and concentrative purchase. In future, more manufacturers will attach importance to the raw materials purchasing, with strategic sourcing.

## 9.3 Raw Materials Sources of Paint Remover Major Manufacturers

**Table Raw Materials Sources of Paint Remover Major Manufacturers**

Major Manufacturers	Raw Materials Sources
WM Barr	Raw material is mainly outsourced.
Savogran	Raw material is mainly outsourced.
Dumond Chemicals	Self-developed & Out-sourcing
Absolute Coatings	Self-developed & Out-sourcing
Fiberlock Technologies	Self-developed & Out-sourcing
Sunnyside	Raw material is mainly outsourced.
Packaging Service Co.	Raw material is mainly outsourced.
Motsenbocker	Raw material is mainly outsourced.
Akzonobel	Self-developed & Out-sourcing
Henkelna	Self-developed & Out-sourcing
3M	Raw material is mainly outsourced.
Green Products	Raw material is mainly outsourced.
3X: Chemistry	Self-developed & Out-sourcing
Franmar Chemical	Self-developed & Out-sourcing
PPG (PPG Aerospace)	Self-developed & Out-sourcing
United Gilsonite Labs	Self-developed & Out-sourcing
Formby's	Raw material is mainly outsourced.
GSP	Raw material is mainly outsourced.
Certilab	Out-sourcing
Cirrus	Raw material is mainly outsourced.
ITW Dymon	Raw material is mainly outsourced.
Rust-Oleum	Raw material is mainly outsourced.
EcoProCote	Raw material is mainly outsourced.
EZ Strip	Out-sourcing
Sansher Corporation	Out-sourcing
Auschem	Out-sourcing
Kimetsan Group	Out-sourcing
Changsha Guterui	Self-developed
TIMEASY	Self-developed



BODE	Self-developed
Hairi Cleaning	Self-developed
DOMIN Chemical	Self-developed

Source: QYR Chemical & Material Research Center, Feb 2017

## 9.4 Downstream Buyers

**Table Major Buyers of Paint Remover**

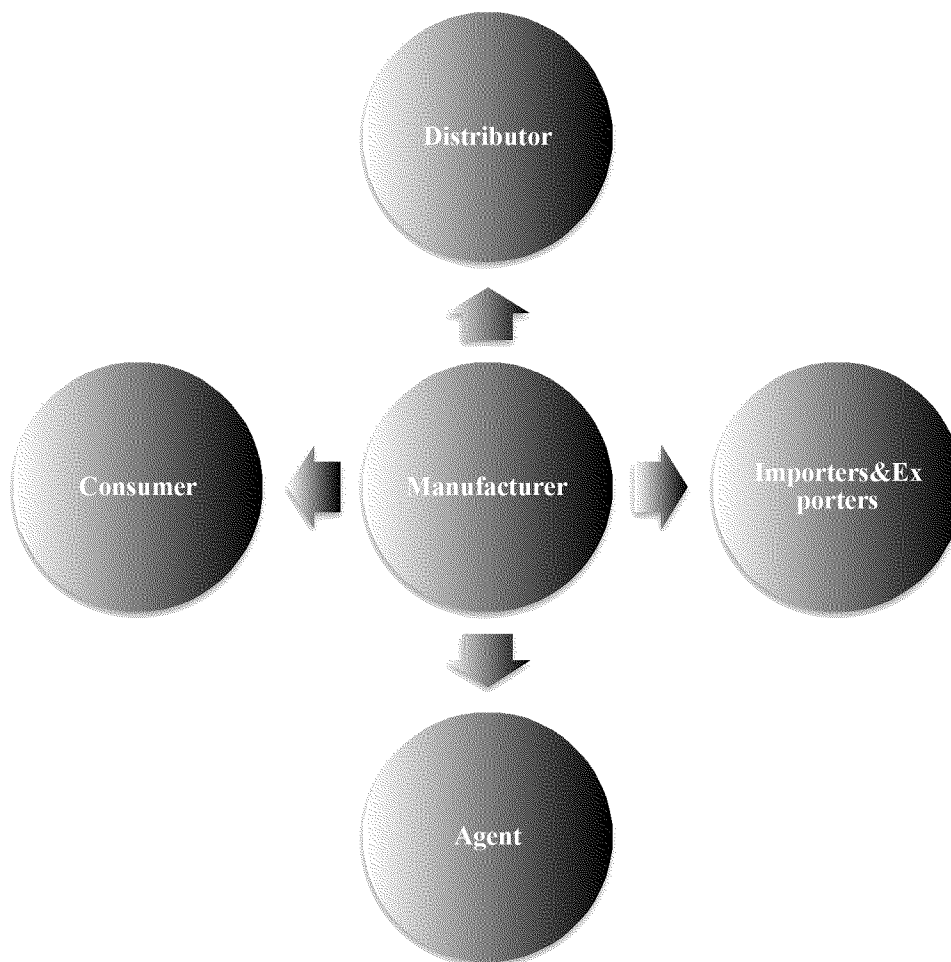
Company	Website
Disney World	<a href="https://disneyworld.disney.go.com/">https://disneyworld.disney.go.com/</a>
IBM	<a href="http://www.ibm.com/us-en/">http://www.ibm.com/us-en/</a>
China Mobile	<a href="http://www.chinamobileltd.com/">http://www.chinamobileltd.com/</a>
DuPont	<a href="http://www.dupont.com/">http://www.dupont.com/</a>
The National Gallery of Art	<a href="http://www.nga.gov/">http://www.nga.gov/</a>
Harvard University	<a href="http://www.harvard.edu/">http://www.harvard.edu/</a>
NASA	<a href="https://www.nasa.gov/">https://www.nasa.gov/</a>
General Electric	<a href="http://www.ge.com/c">http://www.ge.com/c</a>
General Motors	<a href="http://www.gm.com/">http://www.gm.com/</a>
PPS	<a href="http://www.ppslimited.ca/">http://www.ppslimited.ca/</a>
BASF	<a href="https://www.basf.com/">https://www.basf.com/</a>
Chinese National Stadium-Bird's Nest	<a href="http://www.n-s.cn/">http://www.n-s.cn/</a>
Water Cube	<a href="http://www.water-cube.com/cn/">http://www.water-cube.com/cn/</a>

Source: QYR Chemical & Material Research Center, Feb 2017

## 10 Marketing Strategy Analysis, Distributors/Traders

### 10.1 Marketing Channel

Figure Paint Remover Marketing Channels Status



Source: QYR Chemical & Material Research Center, Feb 2017

### 10.2 Market Positioning

#### 10.2.1 Pricing Strategy

Pricing is one of the four elements of the marketing mix, along with product, place and promotion. Pricing strategy is important for companies who wish to achieve success by finding the price point where they can maximize sales and profits. Companies may use a variety of pricing strategies,

depending on their own unique marketing goals and objectives.

#### 1. Premium Pricing

Premium pricing strategy establishes a price higher than the competitors. It's a strategy that can be effectively used when there is something unique about the product or when the product is first to market and the business has a distinct competitive advantage. Premium pricing can be a good strategy for companies entering the market with a new market and hoping to maximize revenue during the early stages of the product life cycle.

#### 2. Penetration Pricing

A penetration pricing strategy is designed to capture market share by entering the market with a low price relative to the competition to attract buyers. The idea is that the business will be able to raise awareness and get people to try the product. Even though penetration pricing may initially create a loss for the company, the hope is that it will help to generate word-of-mouth and create awareness amid a crowded market category.

#### 3. Economy Pricing

Economy pricing is a familiar pricing strategy for organizations that include Walmart, whose brand is based on this strategy. Aldi, a food store, is another example of economy pricing strategy. Companies take a very basic, lowcost approach to marketing-nothing fancy, just the bare minimum to keep prices low and attract a specific segment of the market that is very price sensitive.

#### 4. Price Skimming

Businesses that have a significant competitive advantage can enter the market with a price skimming strategy designed to gain maximum revenue advantage before other competitors begin offering similar products or product alternatives.

#### 5. Psychological Pricing

Psychological pricing strategy is commonly used by marketers in the prices they establish for their products. For instance, \$99 is psychologically "less" in the minds of consumers than \$100. It's a minor distinction that can make a big difference.

## 10.2.2 Brand Strategy

A brand strategy is a formal plan used by a business to create a particular image of itself in the minds of current and potential customers. When a company has created and executed a successful brand strategy, people know without being told who the company is and what they do. Companies as large and established as Coca-Cola, as well as small brands and even businesses that sell services to other companies, all benefit from a carefully created brand strategy. As a result of brand strategy, people develop a particular feeling or opinion about a company —a feeling that drives their buying decisions. This feeling equates to brand equity. The stronger people feel about a brand, the stronger the brand equity.

#### A 10-Step Brand Development Strategy

1. Consider your overall business strategy.
2. Identify your target clients.
3. Research your target client group.
4. Develop your brand positioning.
5. Develop your messaging strategy.
6. Develop your name, logo and tagline.
7. Develop your content marketing strategy.
8. Develop your website.
9. Build your marketing toolkit.
10. Implement, track, and adjust.

This final step in the brand development process may be one of the most important. Obviously a winning brand development strategy doesn't do much good if it is never implemented. You might be surprised at how often that happens. A solid strategy is developed and started with all the good intentions the firm can muster. Then reality intervenes. People get busy with client work and brand development tasks get put off... then forgotten.

That's why tracking is so important. We strongly recommend tracking both the implementation of the plan as well as results. Did the strategy get implemented as planned? What happened with the objective measures, such as search traffic and web visitors? How many new leads, employee applications and partnering opportunities were generated? Only by tracking the entire process can you make sure you are drawing the right conclusions and making the right adjustments.

## 10.3 Distributors/Traders List

**Table Distributors/Traders List**

Traders or Distributors	Contact Information
Antigua Slipway	Tel: 2684601056 E-mail: antslipway@candw.ag <a href="http://www.antiguaslipway.com">http://www.antiguaslipway.com</a>
Budget Marine	Tel: 2684628753 E-mail: Antigua@budgetmarine.com <a href="http://www.budgetmarine.com">http://www.budgetmarine.com</a>
Blue Water Ships Stores	Tel: 2519434179 E-mail: boatservice@bwssal.com <a href="http://www.bwssal.com">http://www.bwssal.com</a>
Medart Marine	Tel: 6362822300 E-mail: info@medartinc.com <a href="http://www.medartmarine.com">http://www.medartmarine.com</a>
Land 'N' Sea Distributors	Tel: 8004327652 <a href="http://www.landnsea.com">http://www.landnsea.com</a>
JANCO, INC.	Tel: (510) 527-9770 (510) 527-2842 Fax: (510) 527-5166

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	Email: <a href="mailto:janco@jancopaintsupplies.com">janco@jancopaintsupplies.com</a> <a href="http://www.jancopaintsupplies.com/">http://www.jancopaintsupplies.com/</a> PHONE TOLL FREE: 1-800-234-1321 MAIL ADDRESS: P.O. BOX 3708 SPOKANE, WA 99220 FAX: 1-509-838-2432 EMAIL: <a href="mailto:info@jensenonline.com">info@jensenonline.com</a> <a href="http://www.jensenonline.com/">http://www.jensenonline.com/</a>
Jensen Distribution Services	
Huttig Building Supplies	Tel: 800-325-4466 Fax: 314-216-2601 <a href="http://www.huttig.com/">http://www.huttig.com/</a>
Southeastern Automotive	460 Decatur St Se, Atlanta, GA 30312-1855 (404) 523-5591 <a href="http://seautomotiveinc.com/">http://seautomotiveinc.com/</a>
Great Dane Trailer Inc.	660 University Ave Sw, Atlanta, GA 30310 Corporate Headquarters 222 N. LaSalle St. Suite 920 Chicago, IL 60601 Phone: (773) 254-5533 <a href="http://www.greatdanetrailers.com/">http://www.greatdanetrailers.com/</a>
Bierschbach Equipment Supply	And 4001 Main Avenue Fargo, ND 58103 Contact Info: 701-492-0855 <a href="http://www.bierschbach.com/">http://www.bierschbach.com/</a>
Empire Builders Supply Co. Inc.	1802 Cerrillos Rd Santa Fe, NM 87505 Contact Info: 505-982-2646 <a href="mailto:empire@ebsnm.com">empire@ebsnm.com</a> <a href="http://www.ebsnm.com/">http://www.ebsnm.com/</a>
Tanjin Beilin	Tel: +86 22-27735508 Fax: +86 22-87805770 <a href="http://www.tjbelle.com/">http://www.tjbelle.com/</a>

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Source: QYR Chemical &amp; Material Research Center, Feb 2017

## **11 Market Effect Factors Analysis**

### **11.1 Technology Progress/Risk**

#### **11.1.1 Substitutes Threat**

The threat of substitutes

Under the background of slower economy growth rate, companies face the higher risks of profit decline

Automotive industry is facing bad condition in China.

Substitutes of remover

Slow economic development

The change of national policy of the industry and import and export

Technology upgrading

#### **11.1.2 Technology Progress in Related Industry**

Alternatives

Heat guns are an alternative to chemical paint strippers. When heated, softened paint clumps and is easier to contain. High-temperature heat guns at 1,100 ° F (590 ° C) more create toxic lead fumes in lead-based paint, but low-temperature heat guns and 400 ° F (200 ° C) infrared paint removers do not create lead fumes. Fire is a possible hazard of using heat guns.

Steam can be used on large surfaces or items to be stripped, such as window sash, can be placed inside a steam box.

### **11.2 Consumer Needs/Customer Preference Change**

Consumers are generally quick-change, to get or use newfangled products, better experience, better convenience and more quicker; to find and meet the needs of consumers, and exceeding expectation, better service. The world changes quickly, especially in mobile internet and consumer electronics, and now the mobile internet and consumer electronics are changing the traditional sectors, to more efficient, more cheaper and powerful.

### **11.3 Economic/Political Environmental Change**

At present, global economy is fluctuant, and most countries take measures to stimulate the economy, especially in Japan, Europe, Australia and the resources providing countries, like Russia, Middle East, Brazil etc. In many fields, China is the largest consumer, but in the past several years, China's economic growth slows. The China government is reforming the economic structure, to release

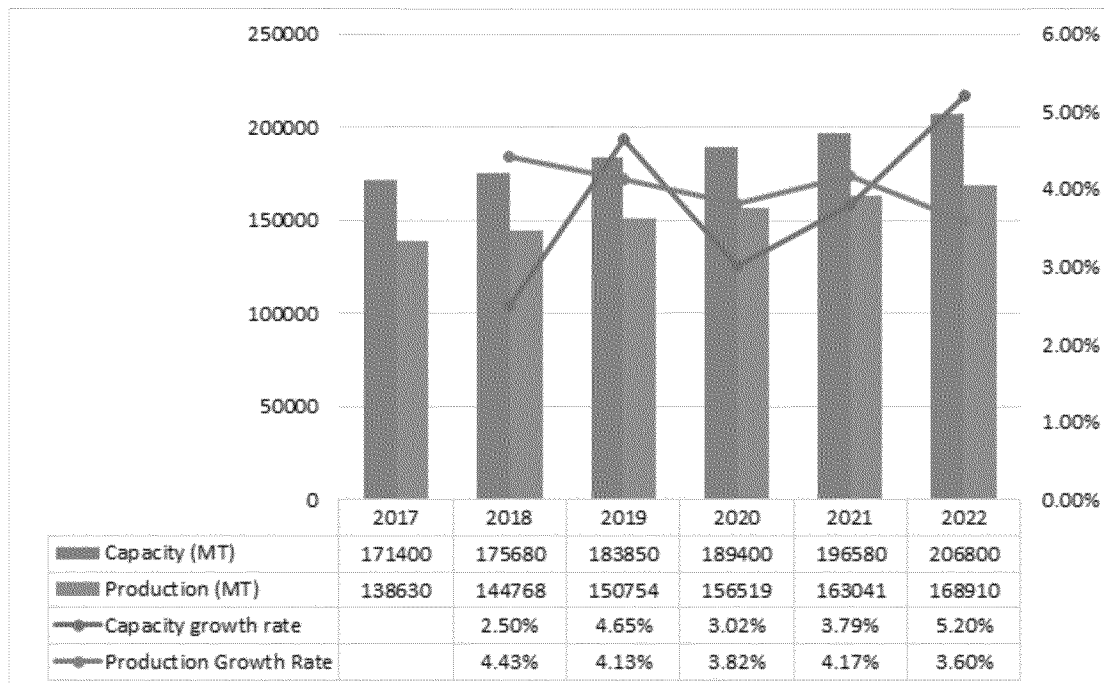
energy of economy. USA economy is relatively stable with low-speed-growth, but in future, it also is full of risk. In Southeast Asia, the economy also is fluctuated the economic base is comparatively unsubstantial, due to the exchange fluctuations. In India, although many people look to further increase in India, but the economic aggregate is too low and the infrastructure is behindhand and inefficient. In a long term, India will keep a stable and low growth in economy, due to its economic structure and bureaucratic system.

On the other hand, the political factors, like government succession, security fears, trade dispute, domestic employment, even the regional military crisis, always affect the economic activity, country to country, corporation to country. So it needs us with deep insight, to analyze the prospect avoid risk, to grasp the opportunity and reduce losses.

## 12 Global Paint Remover Market Forecast (2017-2022)

### 12.1 Global Paint Remover Capacity, Production , Revenue Forecast (2017-2022)

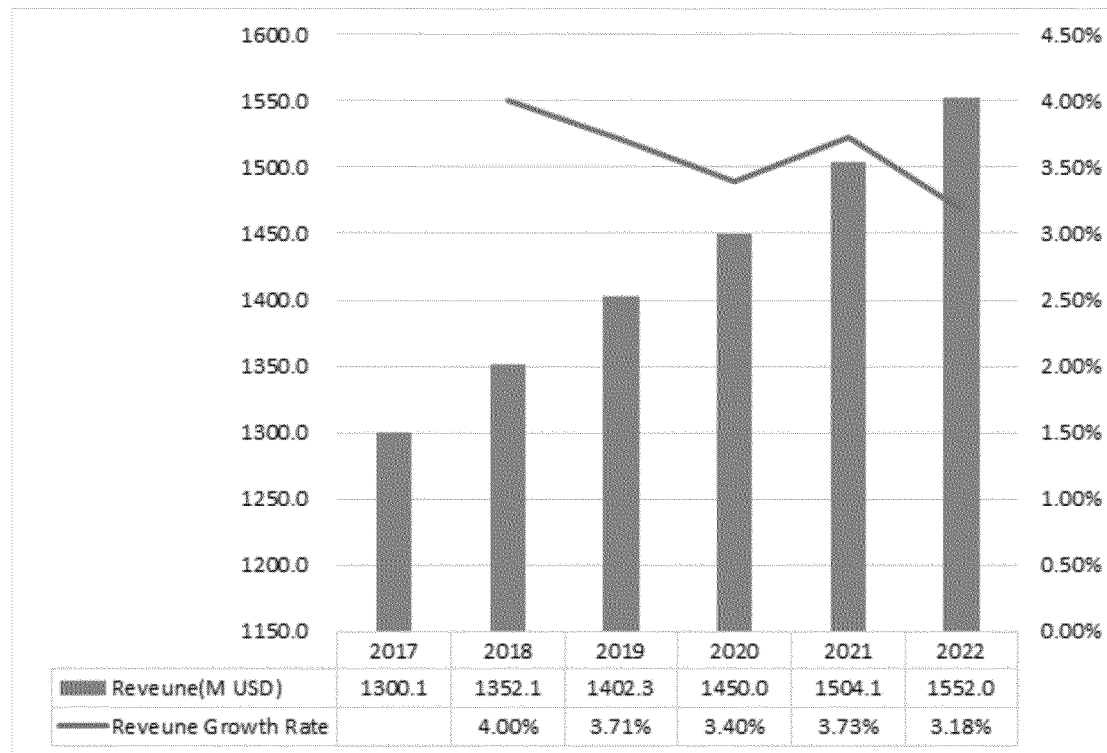
**Figure Global Paint Remover Capacity, Production and Growth Rate Forecast (2017-2022) (MT)**



Source: QYR Chemical & Material Research Center, Feb 2017



**Figure Global Paint Remover Revenue and Growth Rate Forecast (2017-2022) (M USD)**



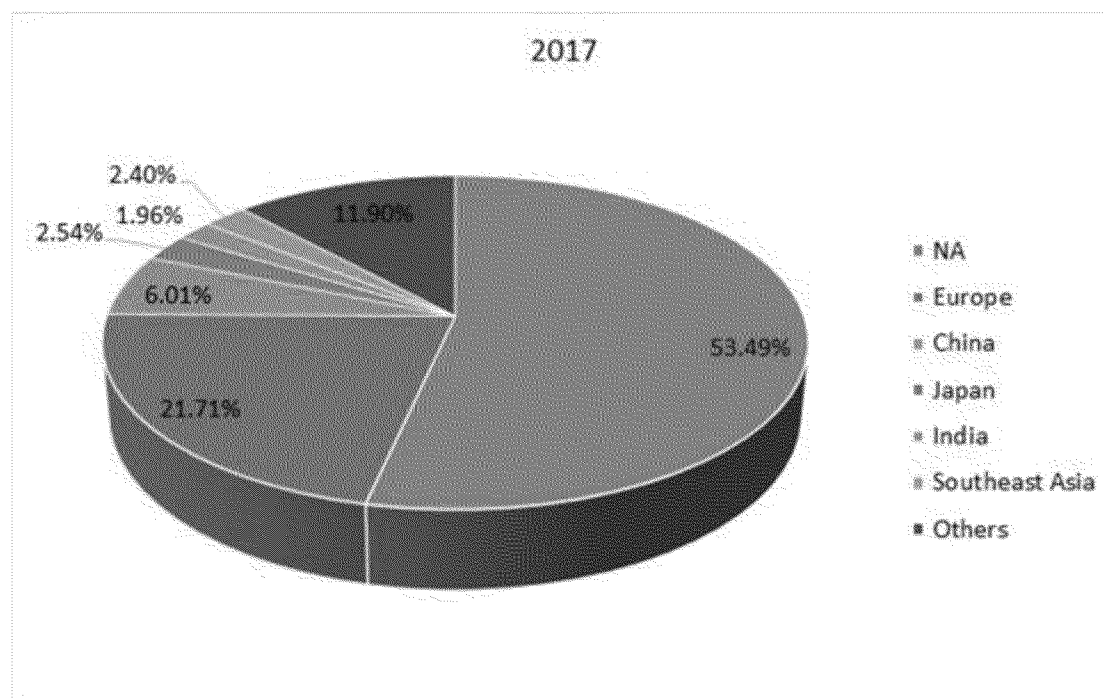
Source: QYR Chemical & Material Research Center, Feb 2017

## 12.2 Global Paint Remover Production, Consumption Forecast by Regions (2017-2022)

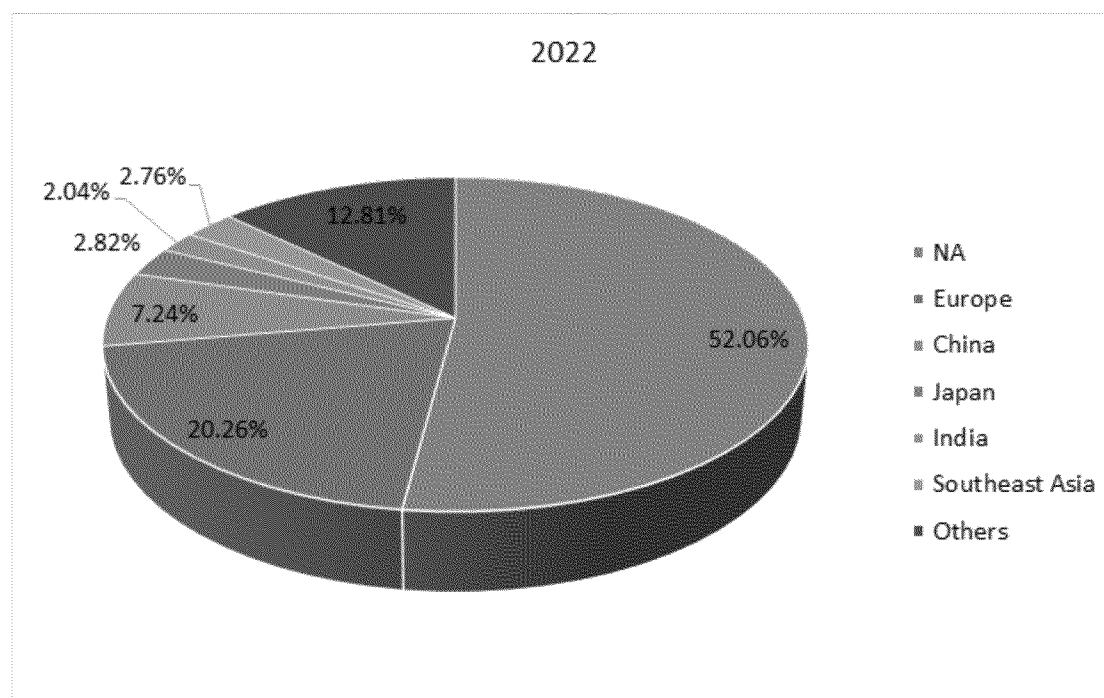
**Table Global Paint Remover Production Forecast by Regions (2017-2022) (MT)**

	2017	2018	2019	2020	2021	2022
NA	74152	76792	79598	82256	85283	87937
Europe	30101	30935	31796	32579	33485	34223
China	8325	9219	9906	10724	11504	12237
Japan	3515	3784	3936	4282	4525	4763
India	2715	2972	3085	3220	3364	3445
Southeast Asia	3331	3744	3870	4147	4475	4662
Others	16491	17322	18563	19311	20405	21643
Total	138630	144768	150754	156519	163041	168910

Source: QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Production Forecast by Regions 2017**

Source: QYR Chemical &amp; Material Research Center, Feb 2017

**Figure Global Paint Remover Production Forecast by Regions 2022**

Source: QYR Chemical &amp; Material Research Center, Feb 2017

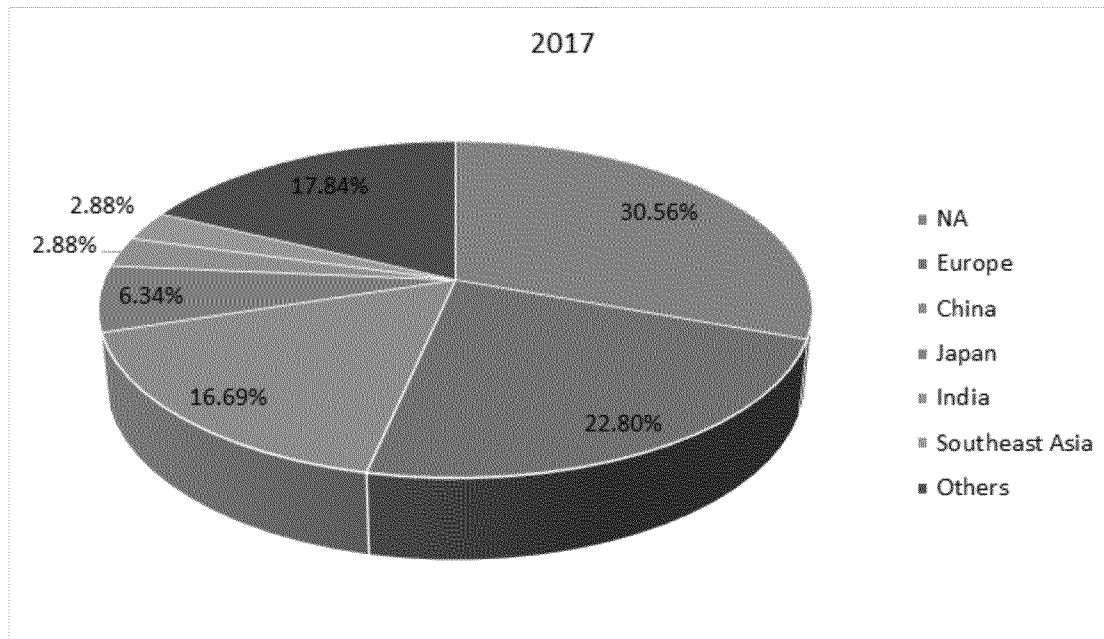
**Table Global Paint Remover Consumption Forecast by Regions (2017-2022)**

	2017	2018	2019	2020	2021	2022
NA	42368	43423	44769	45701	46975	47934

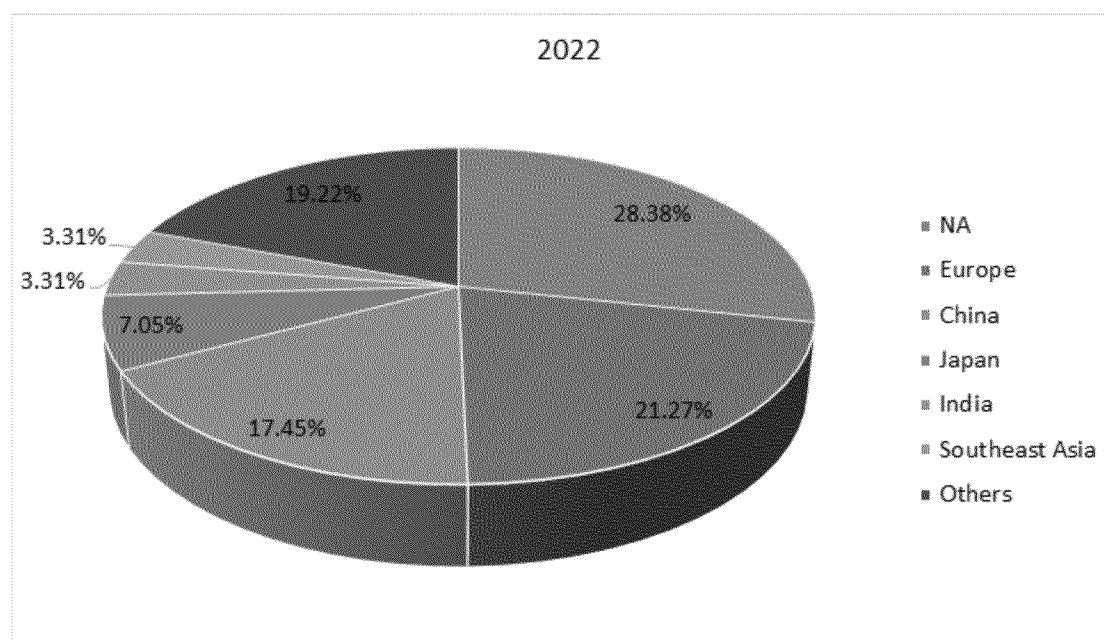
Europe	31606	32481	33386	34208	35159	35934
China	23138	24435	25627	26986	28246	29479
Japan	8788	9460	9840	10706	11313	11909
India	3997	4493	4644	4976	5370	5595
Southeast Asia	3997	4493	4644	4976	5370	5595
Others	24736	25983	27844	28966	30608	32464
Total	138630	144768	150754	156519	163041	168910

Source: QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Consumption Forecast by Regions 2017**



Source: QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Consumption Forecast by Regions 2022**

Source: QYR Chemical &amp; Material Research Center, Feb 2017

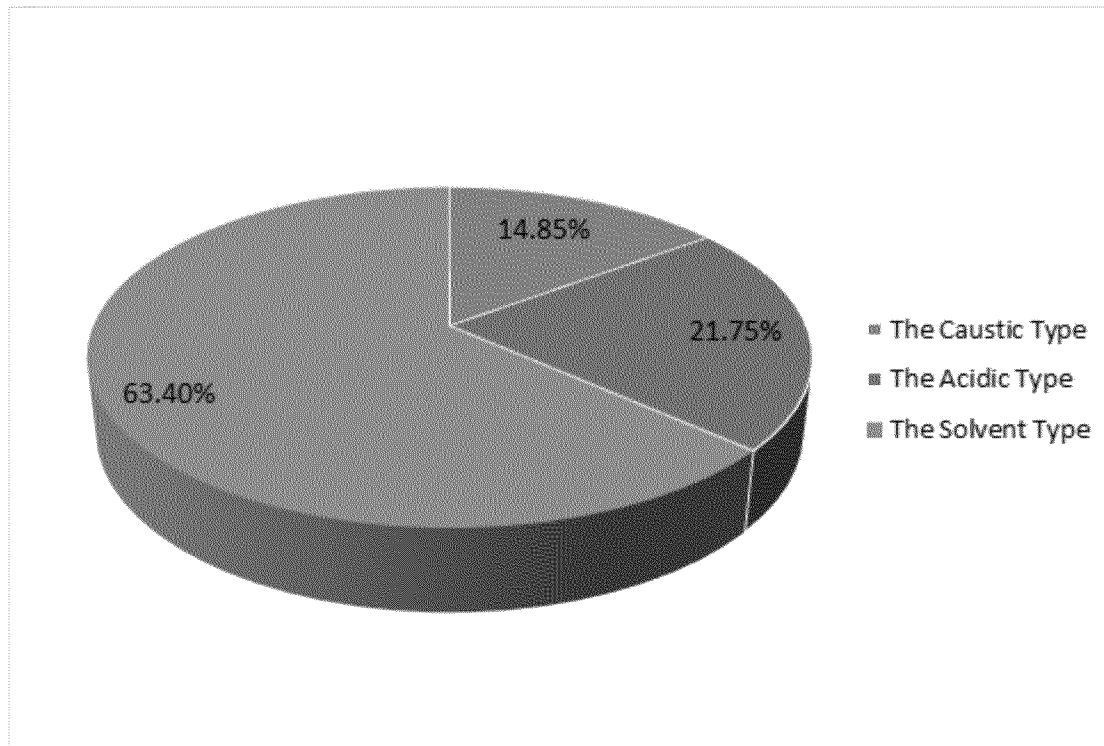
## 12.3 Global Paint Remover Production Forecast by Type (2017-2022)

**Table Global Paint Remover Production Forecast by Type (2017-2022) (MT)**

	2017	2018	2019	2020	2021	2022
The Caustic Type	20586	21619	22719	23802	25017	26149
The Acidic Type	30151	31238	32160	33006	33982	34791
The Solvent Type	87893	91911	95874	99710	104042	107970

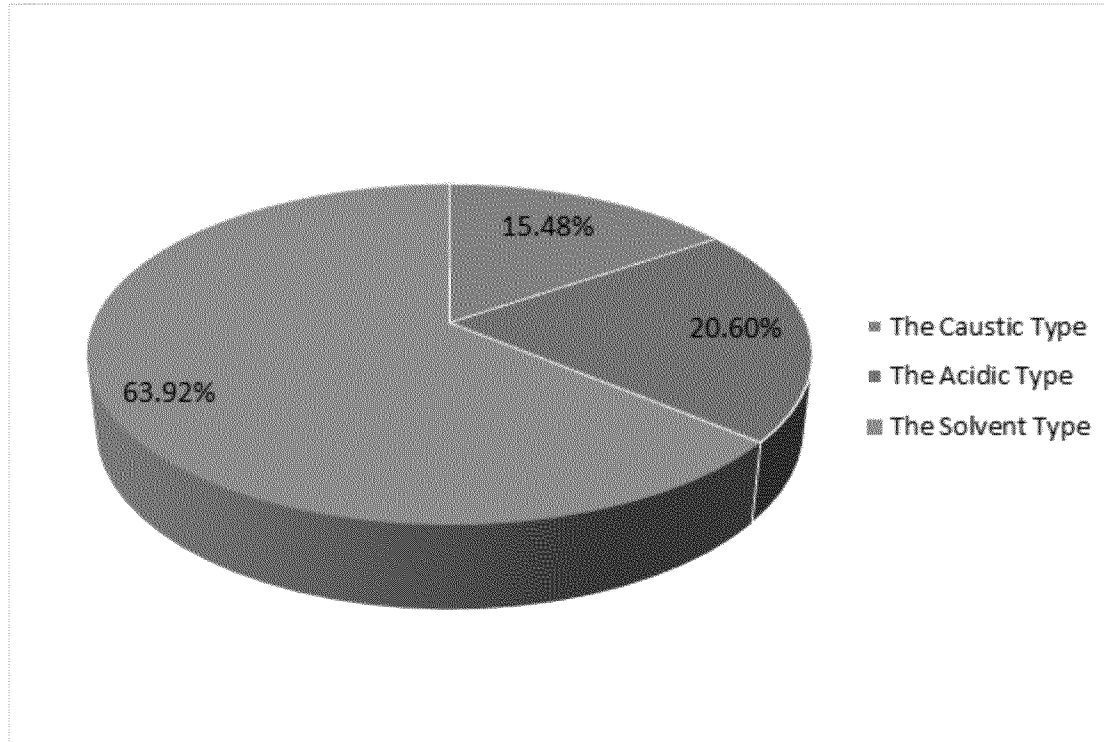
Source: QYR Chemical &amp; Material Research Center, Feb 2017

**Figure Global Paint Remover Production Forecast by Type 2017**



Source: QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Production Forecast by Type 2022**



Source: QYR Chemical & Material Research Center, Feb 2017

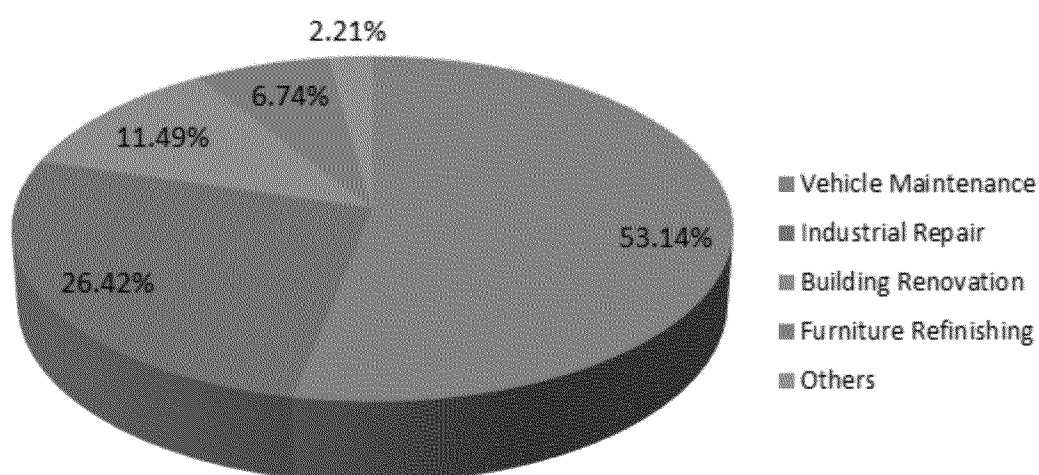
## 12.4 Global Paint Remover Consumption Forecast by Application (2017-2022)

**Table Global Paint Remover Consumption Forecast by Application ( 2017-2022) (MT)**

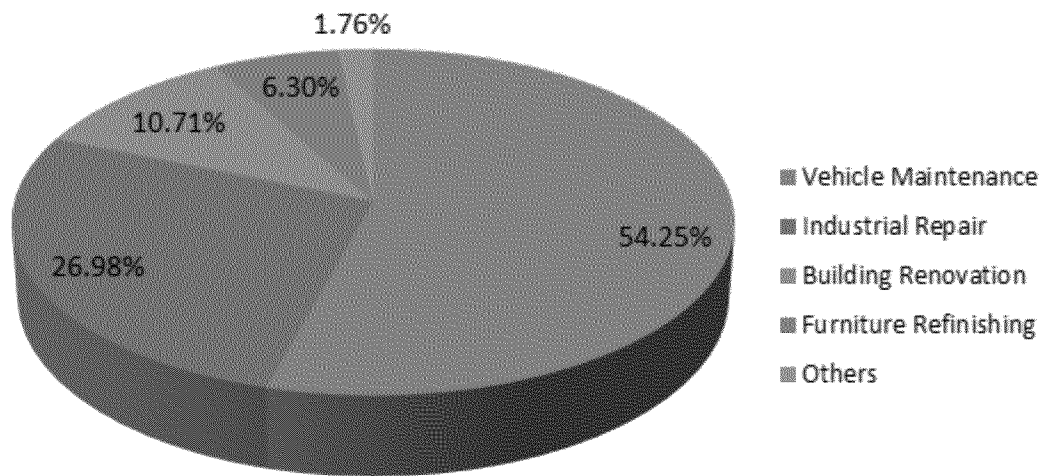
	2017	2018	2019	2020	2021	2022
Vehicle Maintenance	73667	77235	80765	84204	88077	91626
Industrial Repair	36625	38359	40125	41847	43786	45564
Building Renovation	15928	16365	16819	17232	17709	18097
Furniture Refinishing	9343	9723	9970	10190	10447	10650
Others	3067	3086	3074	3046	3022	2973

Source: QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Consumption Forecast by Application 2017**



Source: QYR Chemical & Material Research Center, Feb 2017

**Figure Global Paint Remover Consumption Forecast by Application 2022**

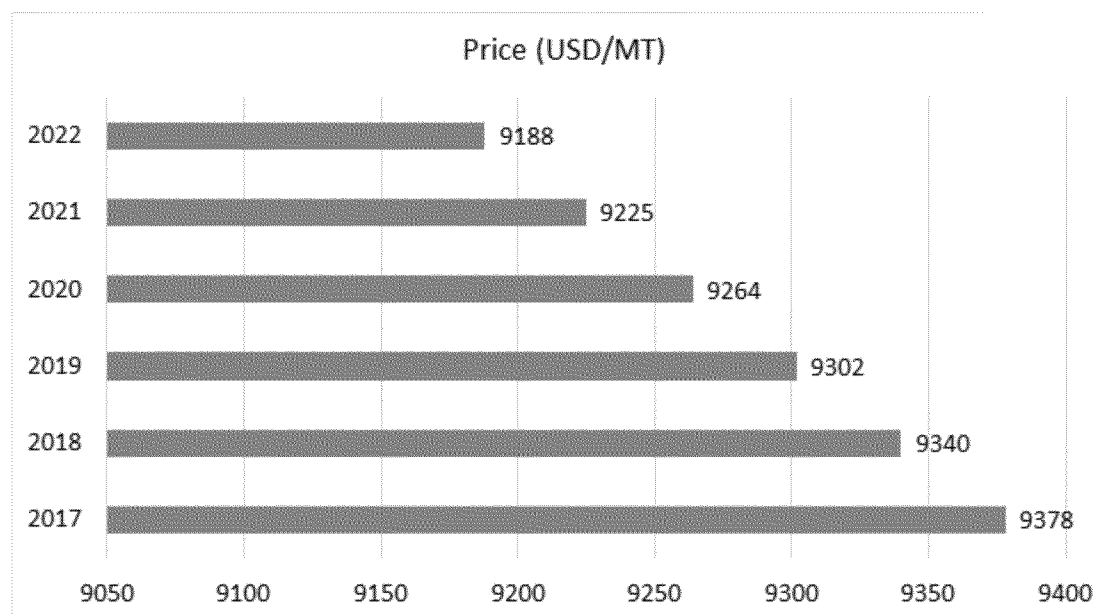
Source: QYR Chemical & Material Research Center, Feb 2017

## 12.5 Paint Remover Price Forecast (2017-2022)

**Table Paint Remover Price Forecast (2017-2022) (USD/MT)**

	2017	2018	2019	2020	2021	2022
Price (USD/MT)	9378	9340	9302	9264	9225	9188

Source: QYR Chemical & Material Research Center, Feb 2017

**Figure Paint Remover Price Forecast (2017-2022)**

Source: QYR Chemical & Material Research Center, Feb 2017



## 13 Research Findings and Conclusion

The raw materials of paint remover are chlorinated hydrocarbons, ketones, esters, alcohols, benzene and other solvents. And the paint removers are mainly used for historic restoration, boat maintenance, industrial repairs, home improvement, and furniture refinishing, etc.

The Paint remover revenue was 1242.6 M USD in 2016 and is expected to reach 1552.0 M USD in 2022. North America's sales accounted for the highest market share (31.01 %) in 2016, followed by Europe.

The global Paint remover industry mainly concentrates in China, North America and Europe. The global leading players in this market are WM Barr, Savogran, Dumond Chemicals, Absolute Coatings, Fiberlock Technologies, Sunnyside, Packaging Service Co., Motsenbocker, Akzonobel, Henkel, 3M, Green Products, 3X: Chemistry, Franmar Chemical, PPG (PPG Aerospace), United Gilsonite Labs, Formby's, GSP, Certilab, Cirrus, ITW Dymon, Rust-Oleum, EcoProCote, EZ Strip, Sansher Corporation, Auschem, Kimetsan Group, Changsha Guterui, TIMEASY, BODE, Hairi Cleaning, DOMIN Chemical and etc.

The impact of technology on paint remover is growing. Innovation is crucial in the development of formulations of paint remover. The reason why the domestic product's price is relatively lower, is just because the product formulation is relatively old, and the application range is relatively narrow. For example, during the preparation of paint remover, generally will added paraffin. Although it can prevent excessive evaporation of the solvent, but after stripping, paraffin is often left in the surface, and it requires thoroughly remove, which gives a big inconvenience to the following painting. Paraffin is replaced by other substances in the paint remover.

New type of paint removers is the future direction of paint remover development. High solids content and water-based systems are the method of choice available. These methods reduce the amount of the organic solvent. Safe to use, but stripping efficiency needs to be improved, and the cost to be reduced.

This is the end of Paint Remover report.

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